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Figure 1. Amino acid sequence of the B4ECv3 protein

MELRVLLCWASLAAALEETLLNTKLETADLKWVTFPQVDGQWEELSG  
LDEEQHSVRTYEVCEVQRAPGQAHWLRTGWVPRRGAVHVYATLRFTM  
LECLSLPRAGRSCKETFTVFYYESDADTATALTPAWMENPYIKVDTV  
AAEHLTRKRPGAEATGKVVNKTLLRLGPLSKAGFYLAFAQDQGACMALL  
SLHLFYKKCAQLTVNLTRFPETVPRELVPVAGSCVVDVAVPAPGSP  
SLYCREDGQWAEQPVGTGCSAPGFEEAEGNTKCRACAQGTFFKPLSGE  
GSCQPCPANSHSNTIGSAVCQCRVGYFRARTDPRGAPCTTPPSAPRS  
VVSRLNGSSLHLEWSAPLES GGREDLTALRCRECRPGGSCAPCGGD  
LTFDPGPRDLVEPWVVVRGLRPDFTYTFEVTALNGVSSLATGPVPFE  
PVNVTTDREVPPAVSDIRVTRSSPSSLSLAWAVPRAPSGAWLDYEVK  
YHEKGAEGPSSVRFLKTSENRAELRGLKRGASYLVQVRARSEAGYGP  
FGQEHHSQTQLDESEGWREQGSKRAILQIEGKPIPNPLLGLDSTRTG  
HHHHHH

Figure 2. Amino acid sequence of the B4ECv3NT protein

MELRVLLCWASLAAALEETLLNTKLETADLKWVTFPQVDGQWEELSG  
LDEEQHSVRTYEVCEVQRAPGQAHWLRTGWVPRRGAVHVIATLRFTM  
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GSCQPCPANSHTIGSAVCQCRVGYFRARTDPRGAPCTTPPSAPRS  
VVSRLNGSSLHLEWSAPLES GGREDLTIALRCRECRPGGSCAPCGGD  
LTFDPGPRDLVEPWVVVRGLRPDFTYTFEVTALNGVSSLATGPVPFE  
PVNVTTDREVPPAVSDIRVTRSSPSSLSLAWAVPRAPSGAWLDYEVK  
YHEKGAEGPSSVRFLKTSENRAELRGLKRGASYLVQVRARSEAGYGP  
FGQEHHSQTQLDESEGWREQGSKRAILQISSTVAAARV

Figure 3. Amino acid sequence of the B2EC protein

MAVRRDSVWKYCWGVLMVLCRTAISKSIIVLEPIYWNSSNSKFLP  
GQGLVLYPQIGDKLDIICPKVDSKTVGQYEYKQVYMVDKDQADR  
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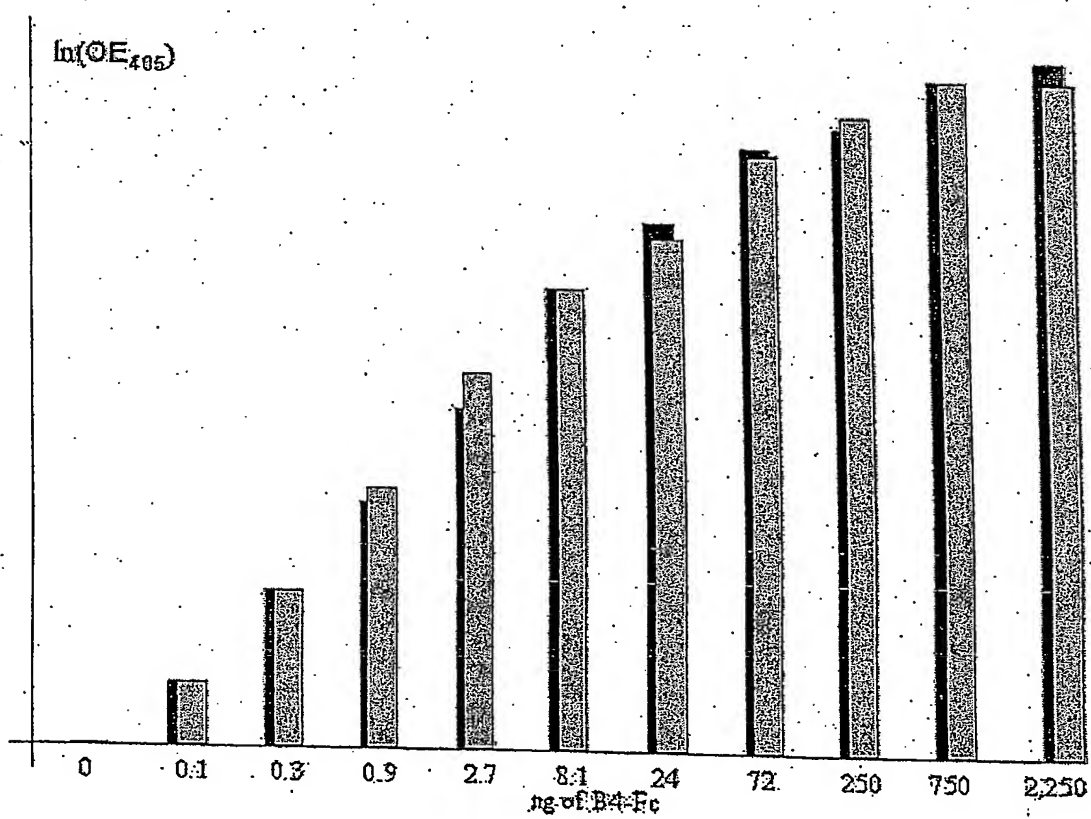
Figure 4. Amino acid sequence of the B4ECv3-FC protein

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CAQGTFKPLSGEGSCQPCPANSHTIGSAVCQCRVGYFRARTDP  
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VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVL  
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PPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP  
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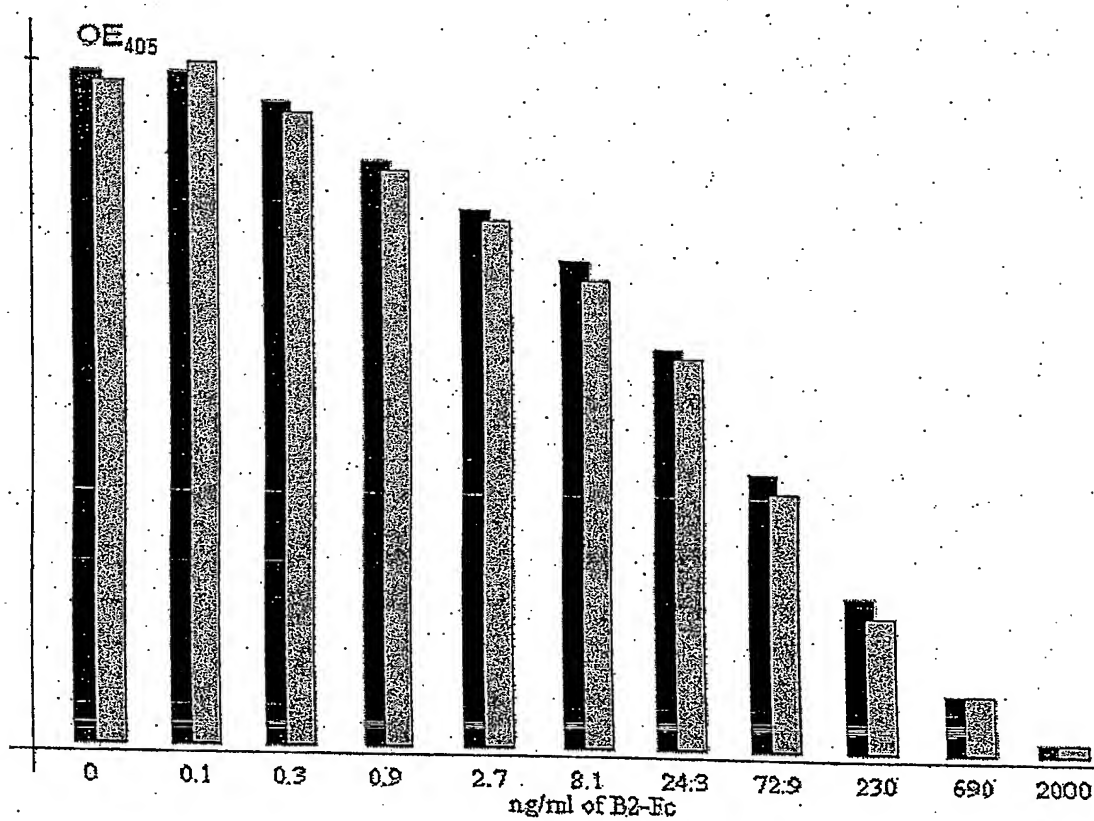
Figure 5. Amino acid sequence of the B2EC-FC protein

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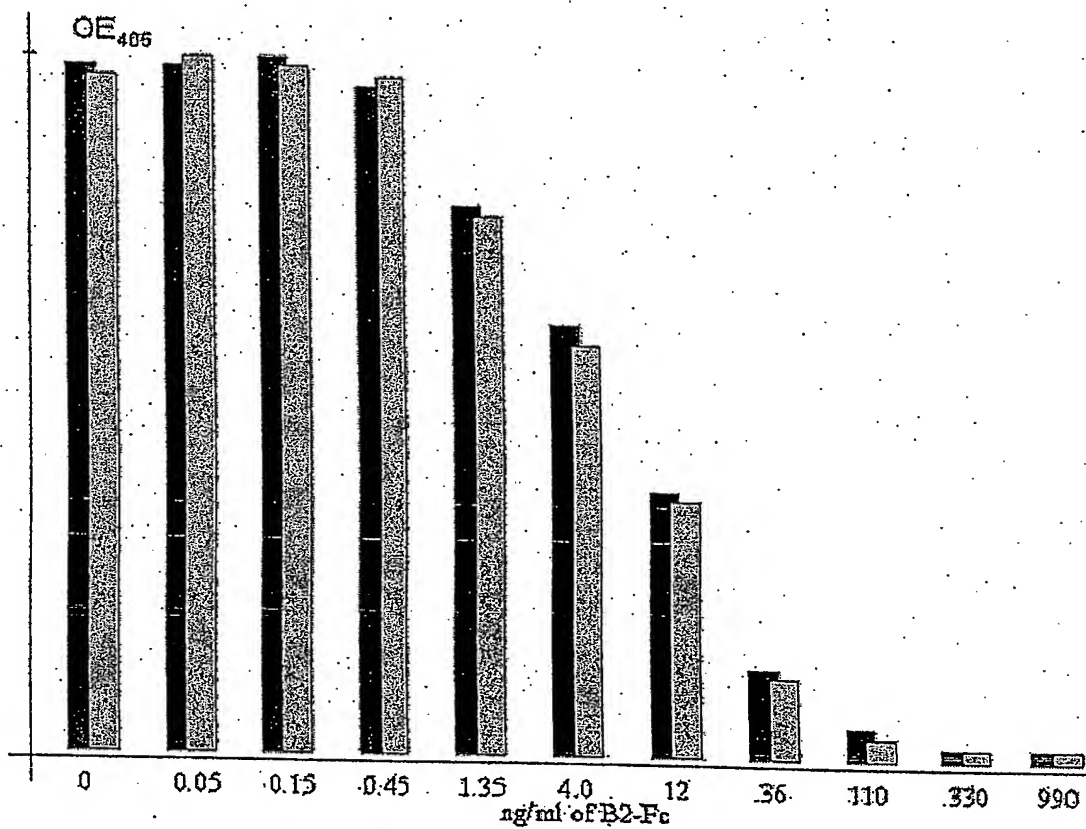
**Fig. 6. B4EC-FC binding assay (Protein A-agarose based)**



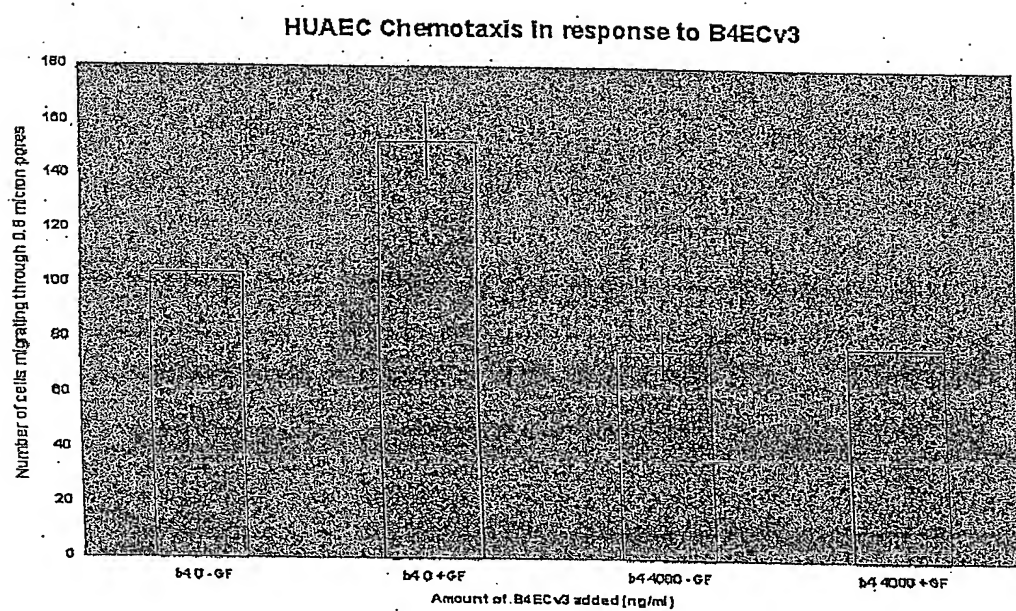
**Fig. 7. B4EC-FC inhibition assay (Inhibition in solution)**



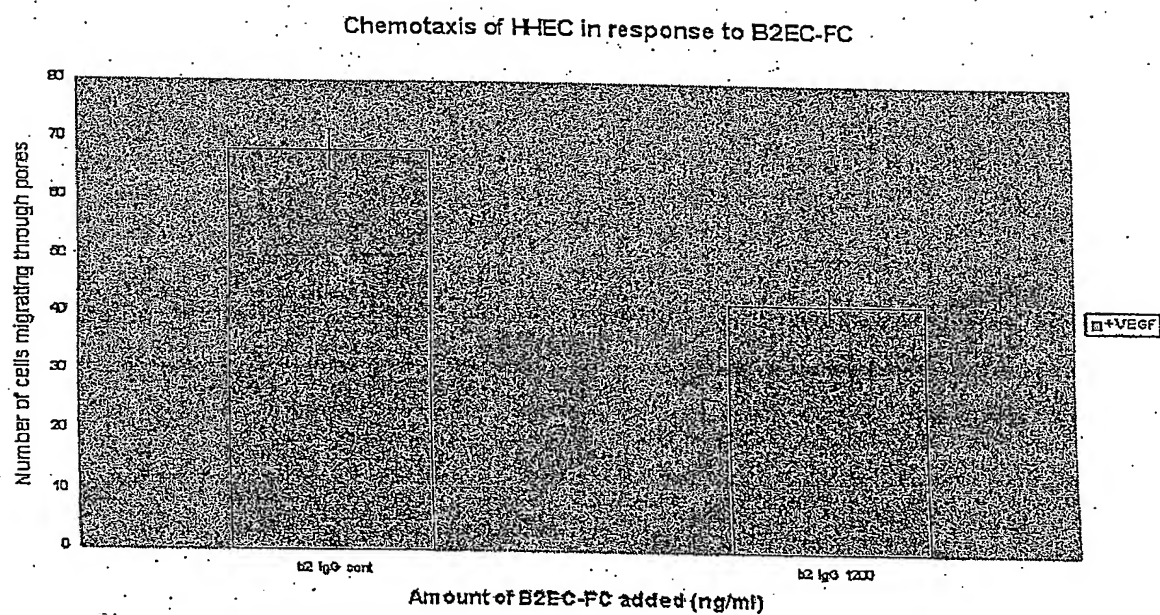
**Fig. 8. B2EC-FC binding assay (Protein-A-agarose based assay)**



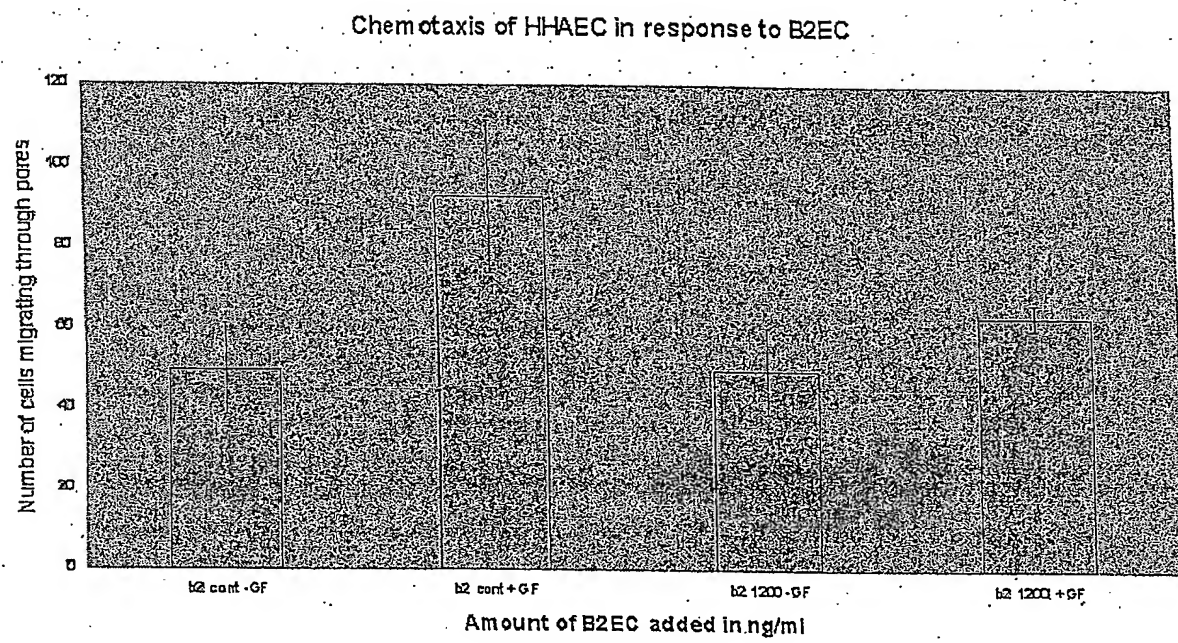
**Fig. 9**



**Fig. 10**



**Fig. 11**





**Fig. 12**

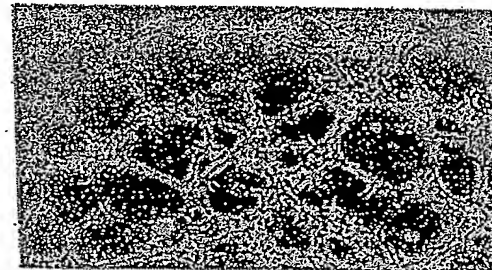
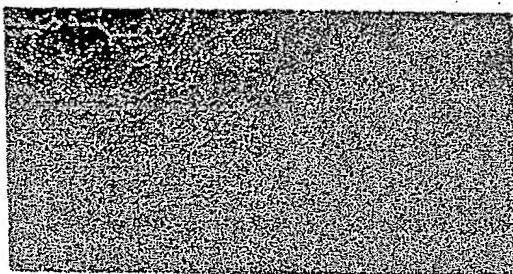
**Effect of B4ECv3 on HUAEC Tubule Formation**

**B4ECv3  
μg/ml**

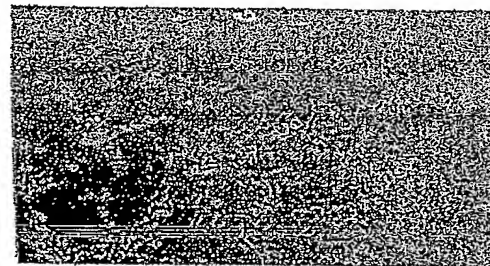
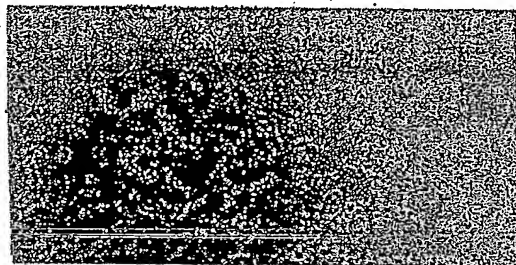
**10 x magnification**

**20 x magnification**

**0**

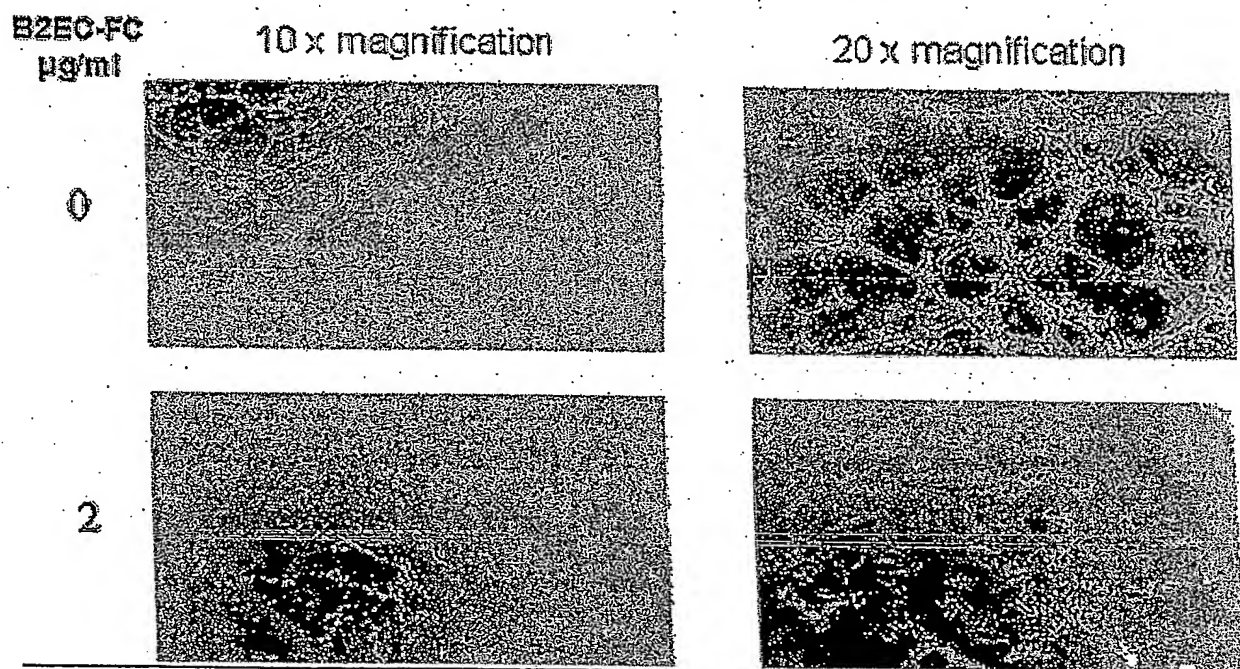


**2**



**Fig. 13**

**Effect of B2EC-FC on HUAEC Tubule Formation**



# hEphrin B2 constructs

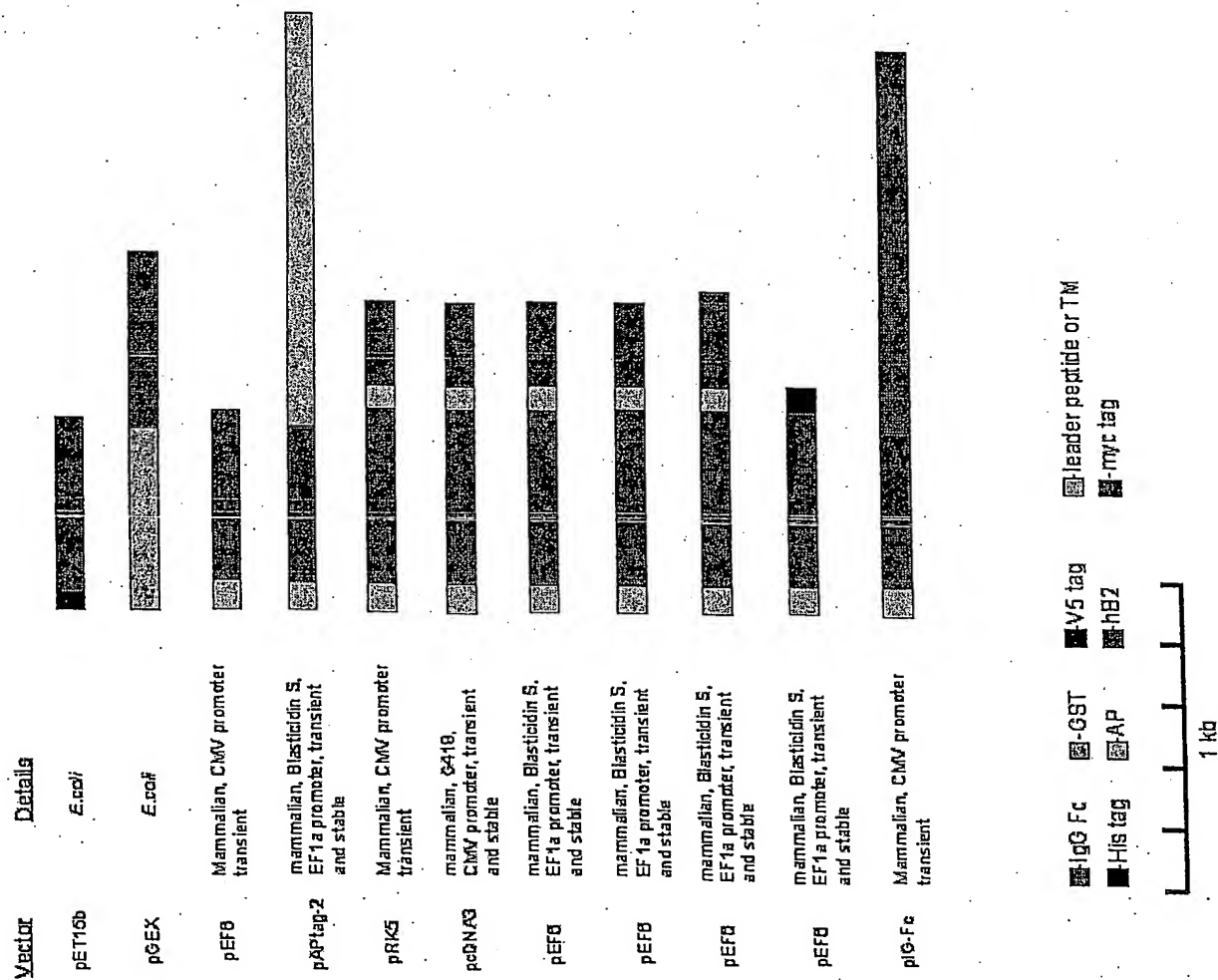


Figure 14

# hEph B4 constructs

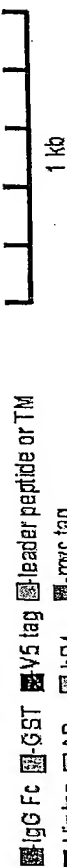
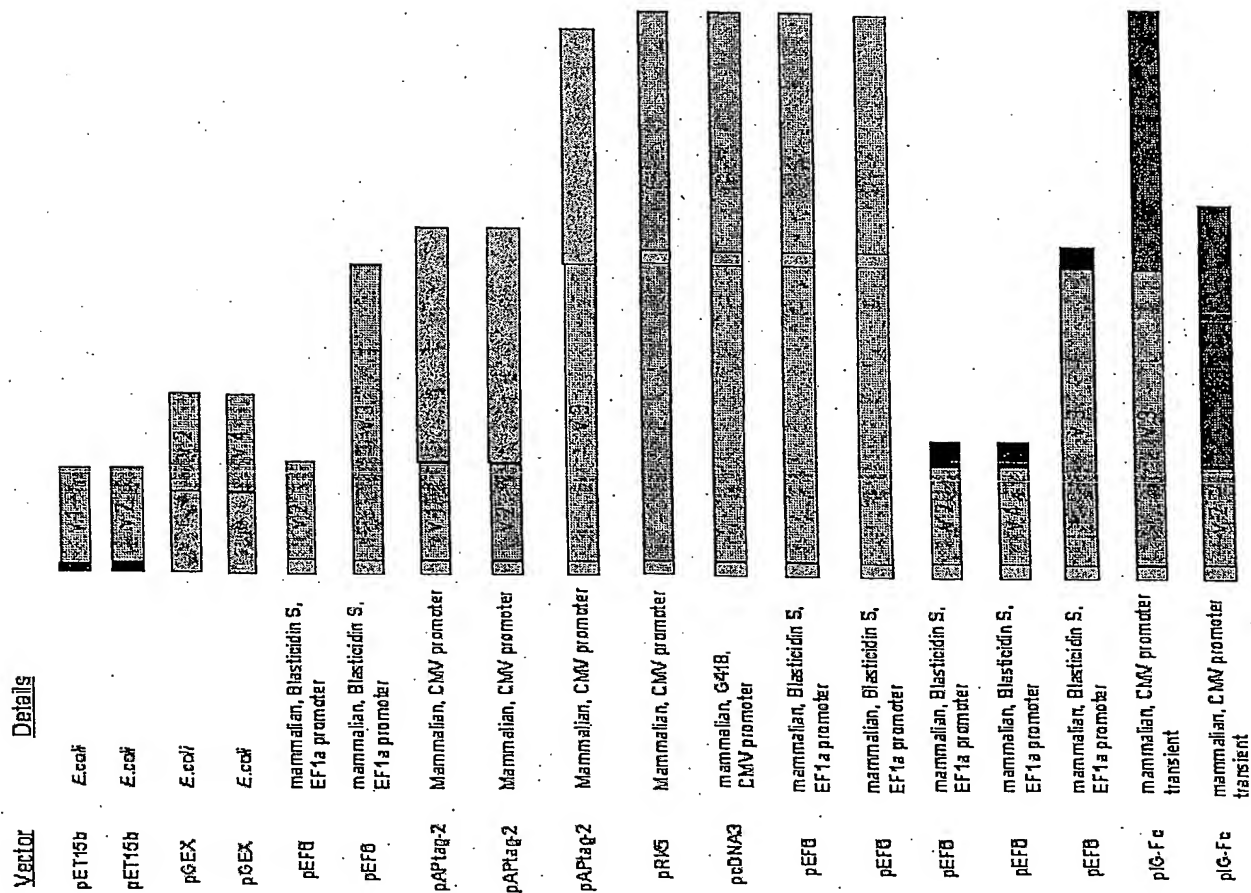


Figure 15

Figure 16. Domain structure of the recombinant soluble EphB4EC proteins.

Fig.1

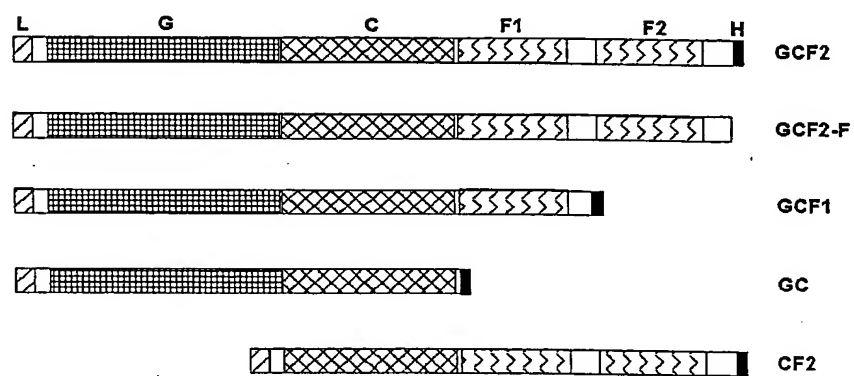


Figure 17A. Purification and ligand binding properties of the EphB4EC proteins

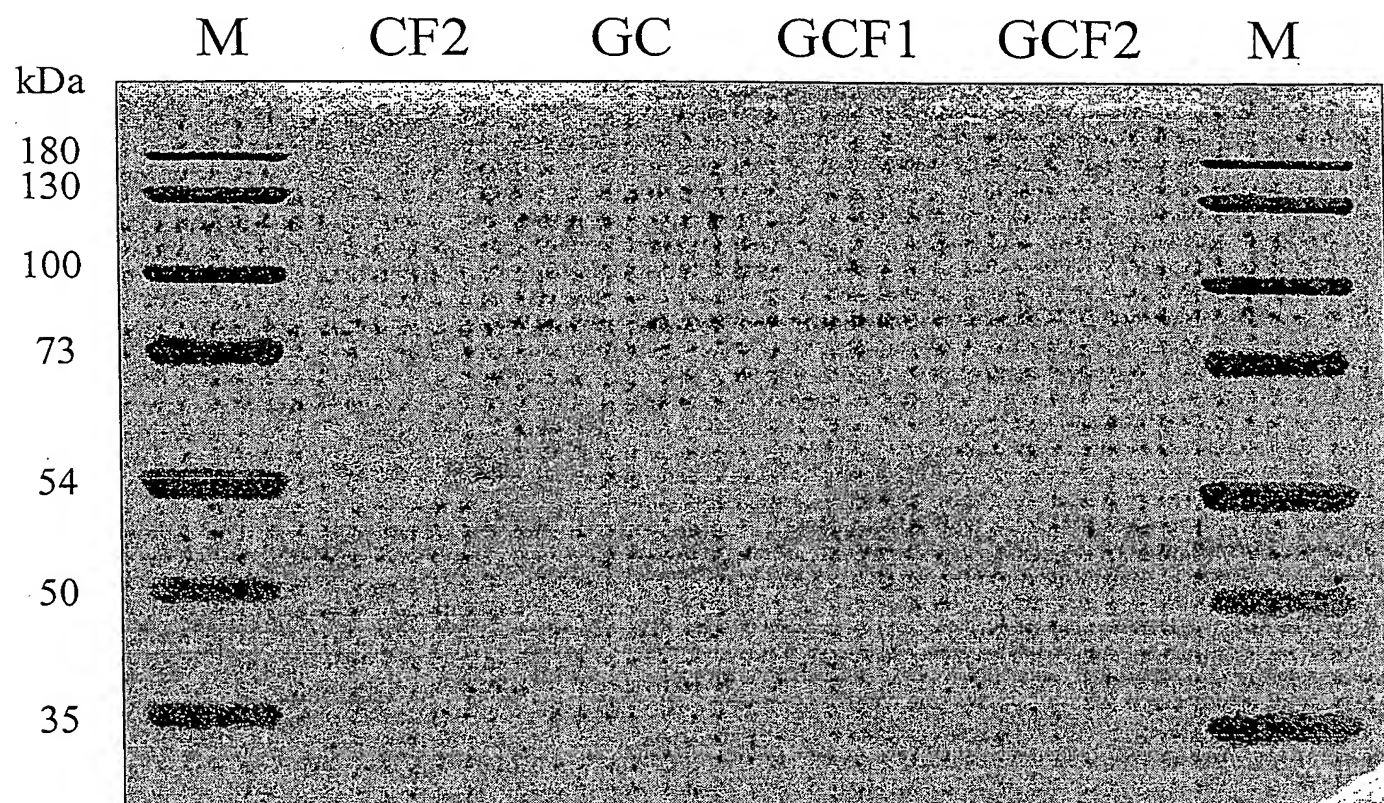
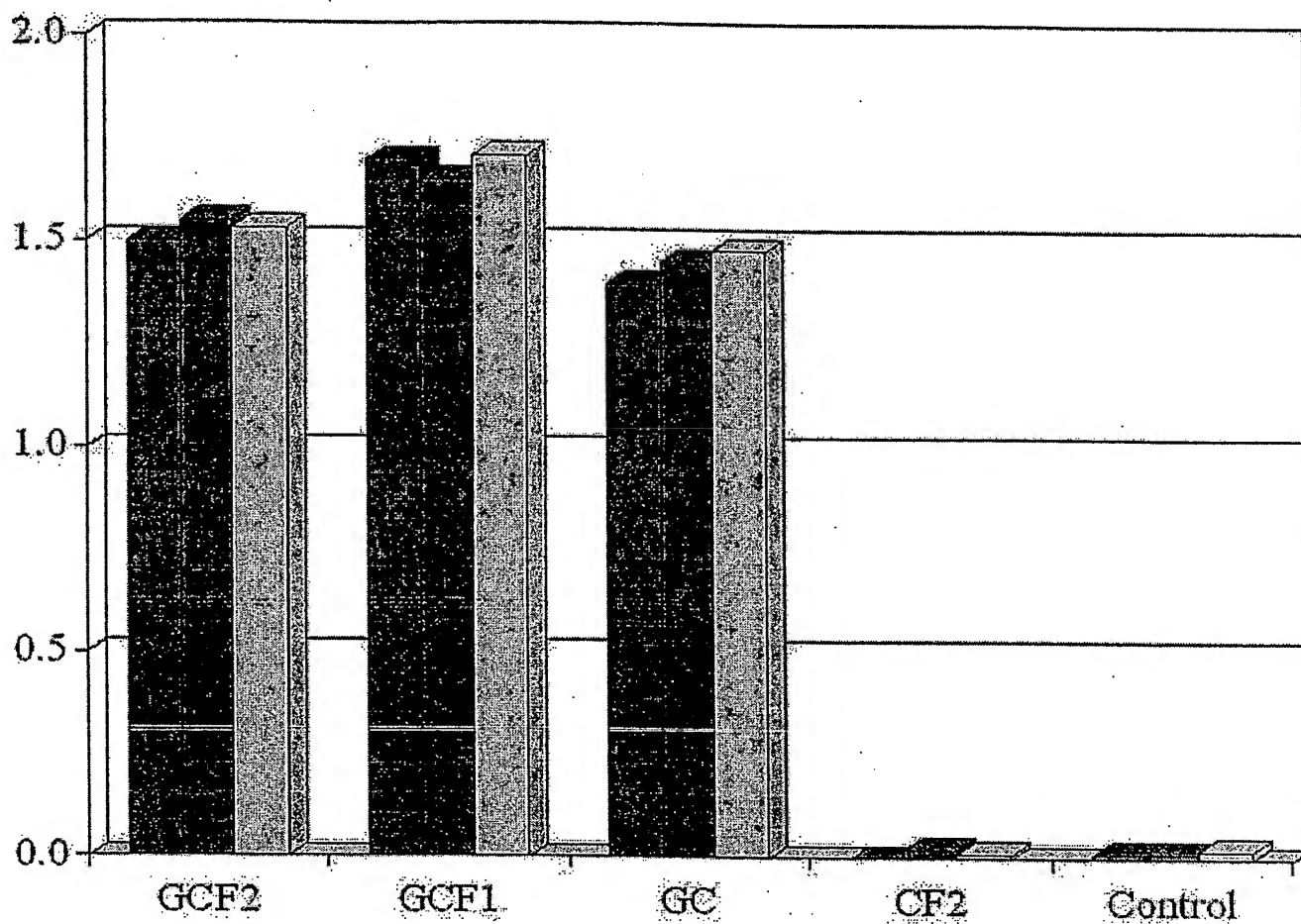


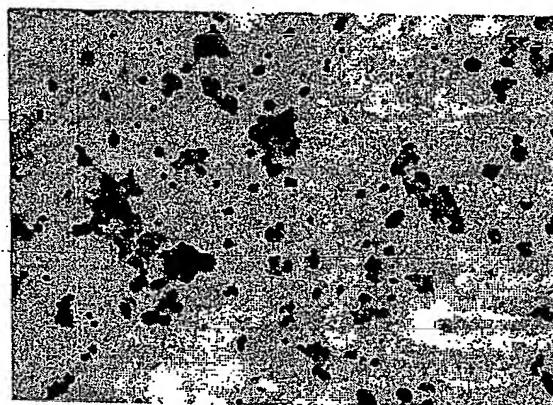
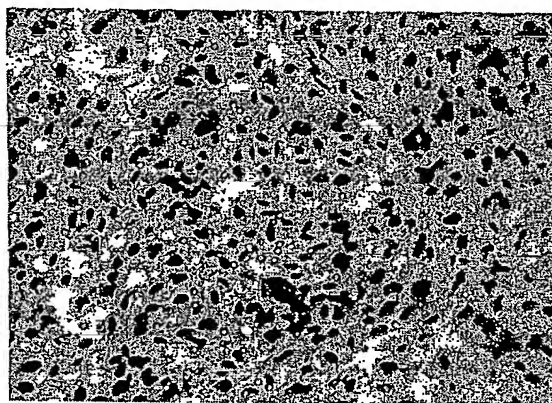
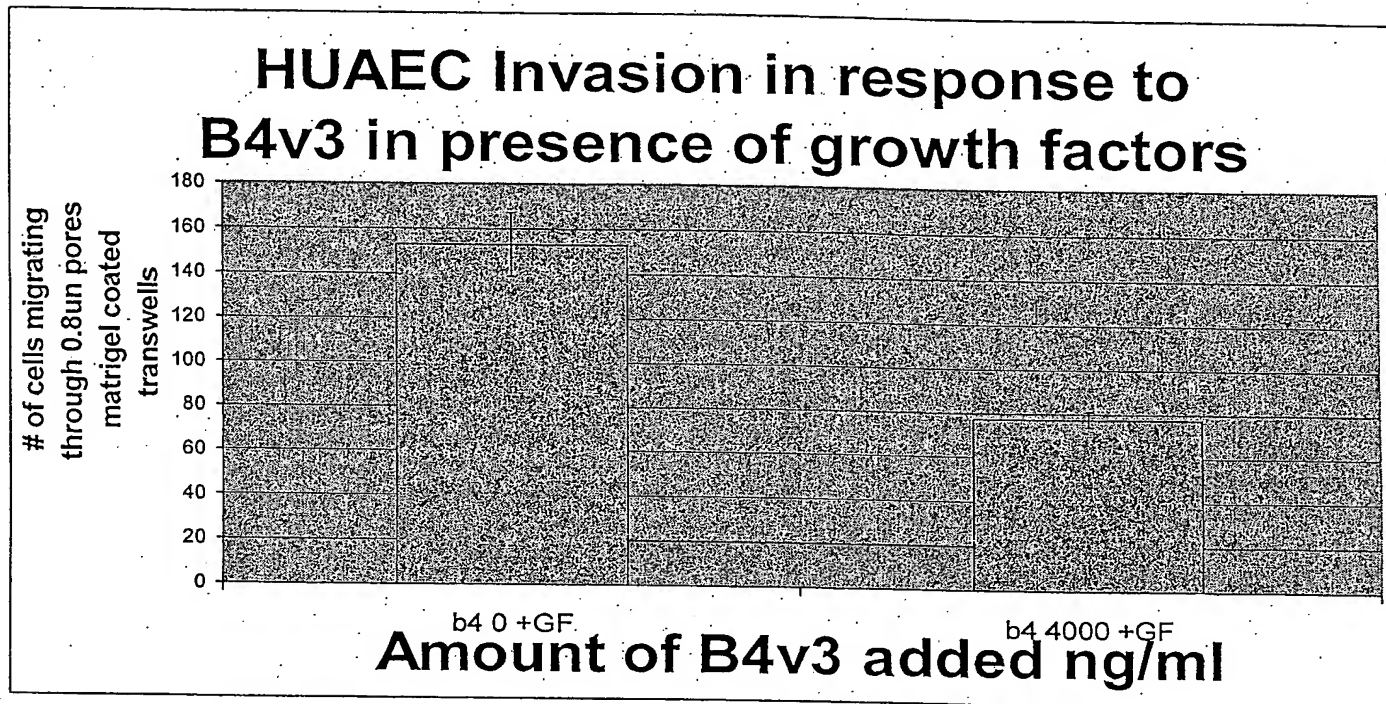
Figure 17B. Binding of Ephrin B2-AP fusion to EphB4-derived recombinant proteins immobilized on NTA-agarose beads.





**Fig. 18**

# **B4v3 inhibits chemotaxis, In Vitro Invasion Assay**



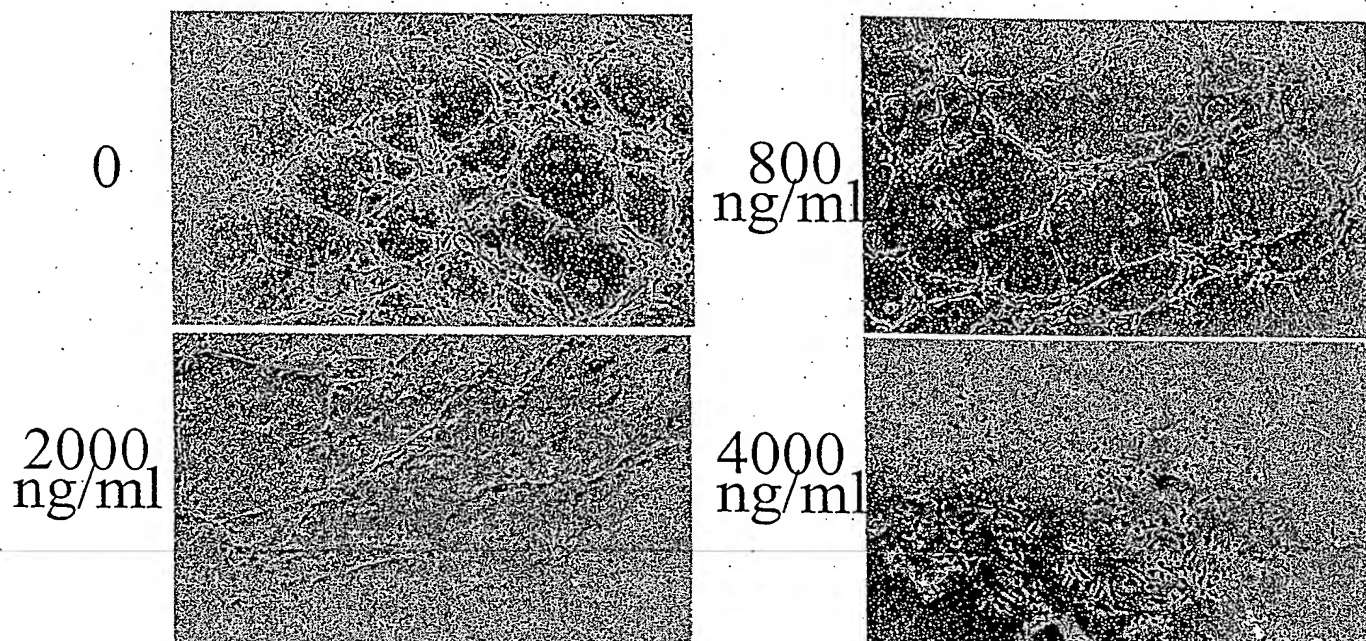
**In Vitro Invasion Assay:** Chemotaxis of HUAECs, measuring migration and degradation of basement membrane ability, was assessed using a modified Boyden chamber, transwell membrane filter inserts in 24 well plates; 6.5 mm diam, 8µm pore size, 10µm thick polycarbonate membranes. The upper surfaces of the transwell were pre-coated with matrigel. The cell suspensions of HUAECs in 0.25% BSA ( $2 \times 10^5$  cells/ml) in 200µl of EBM were seeded in the upper chamber and the B4v3 protein was added simultaneously with stimulant (VEGF or bFGF) to the lower compartment of the chamber and their migration across a polycarbonate filter in response to 10-20 ng/ml of VEGF with or without 100nM-1µM test compound was investigated. After incubation for 4-24h at 37, The upper surface of the filter was scraped with swab and filters were fixed and stained with Diff Quick. Triplicate. Ten random fields at 200x mag were counted and the results expressed as mean # per field



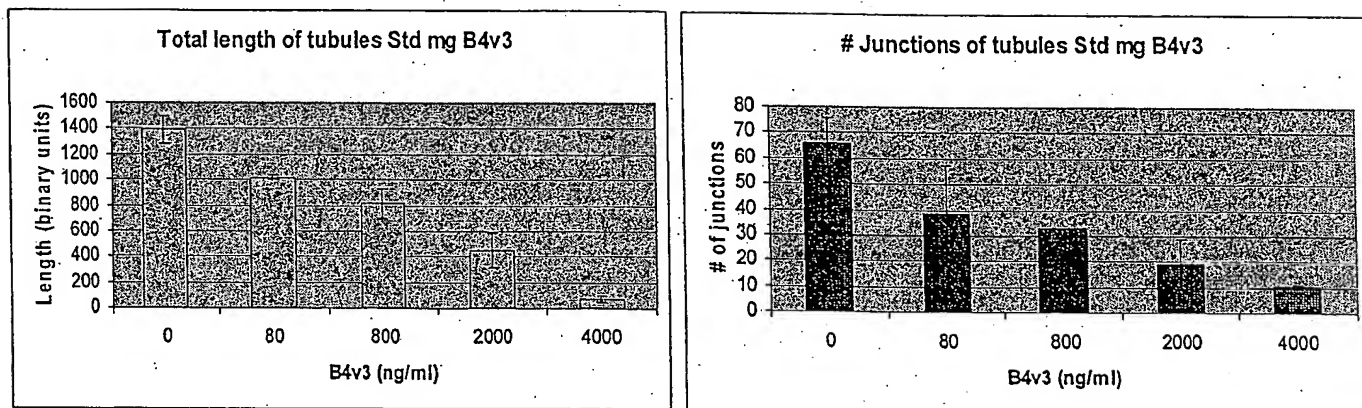
**Fig. 19**

## **B4v3 inhibits tubule formation on Matrigel.**

**A**



**B**



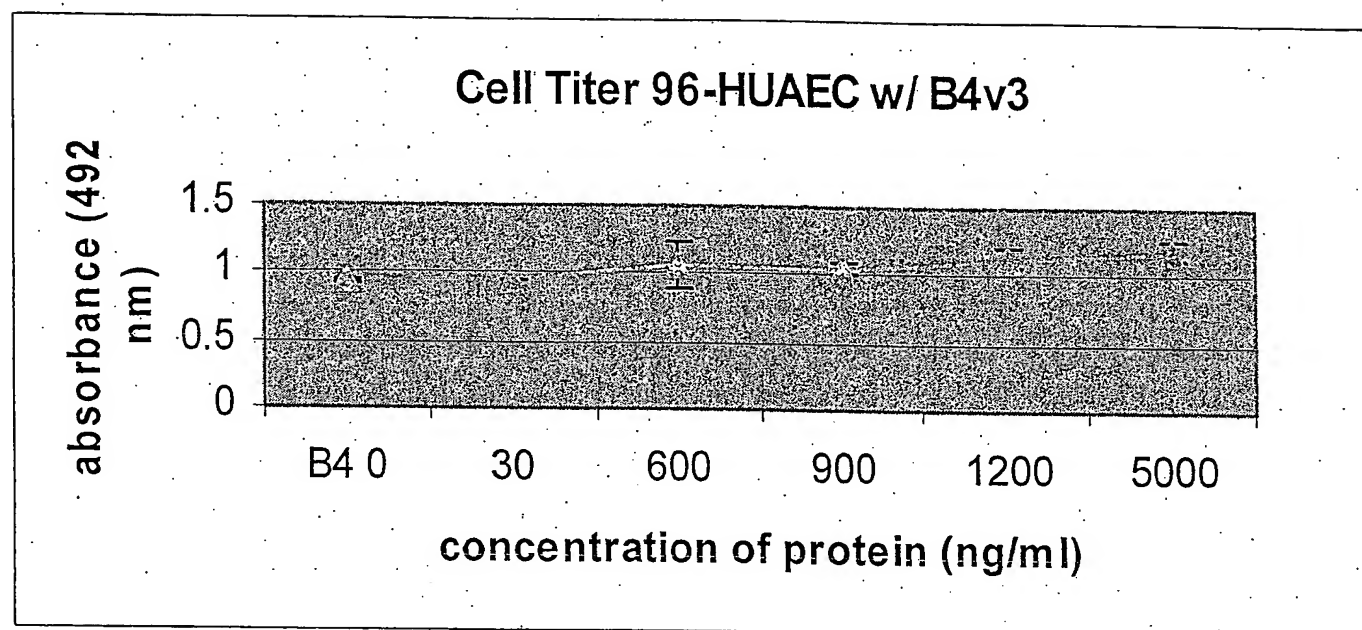
### **B4v3 inhibits tubule formation on Matrigel.**

HUAEC cultures were cultured with B4v3, at 800, 2000, and 4000 ng/ml following seeding on STD matrigel in growth factor stimulated conditions, to analyze tubule formation. Cells were photographed 6h and 24h after seeding, 20X magnification, and the total length of the tubule-like network formed in the well, and # of junctions was established.

A, displays the strong inhibition of tubule formation by B4v3 in a representative experiment.

B, shows a quantitation, with AngioSys Software, of the reduction of tube-length obtained with B4v3 at increasing concentrations as well as a reduction in the number of junctions, in comparison to cells with no protein. Results are displayed as mean values  $\pm$  S.D. obtained from three independent experiments performed with duplicate wells.

**Fig. 20**

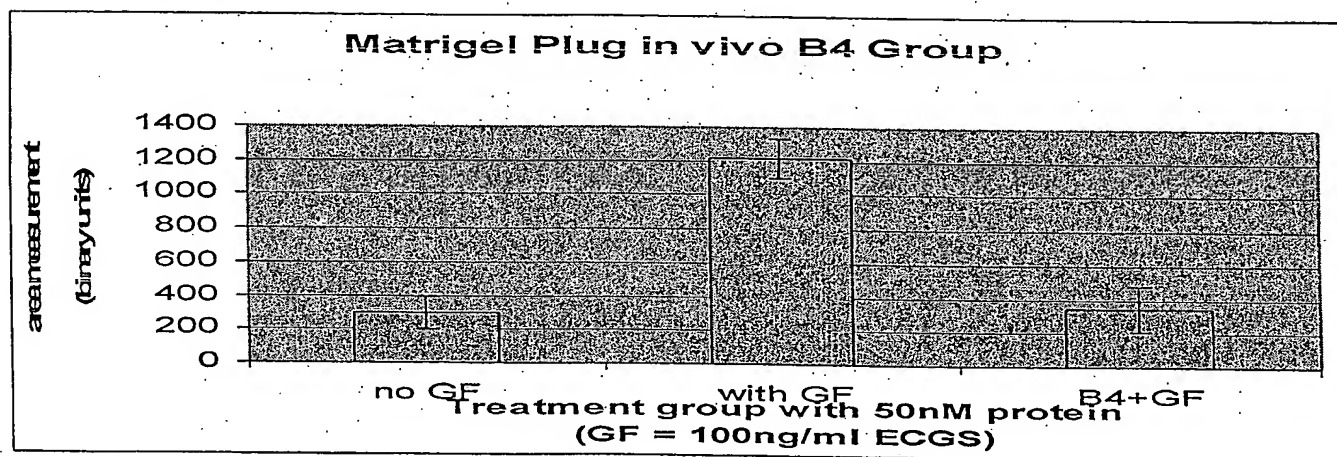
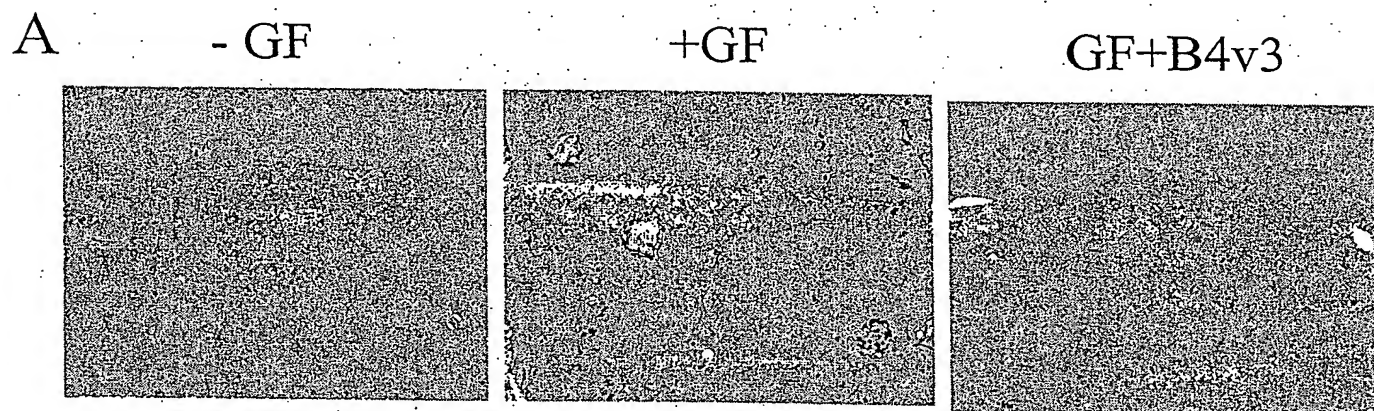


**Cell viability assays:**

Cell viability was determined using the (3-(4,5-dimethylthiazol-2-yl)-5-(3-carboxymethoxyphenyl)-2-(4-sulfophenyl)-2*H*-tetrazolium, inner salt (MTS) assay according to the instructions of the manufacturer (Promega, Madison, WI, USA).

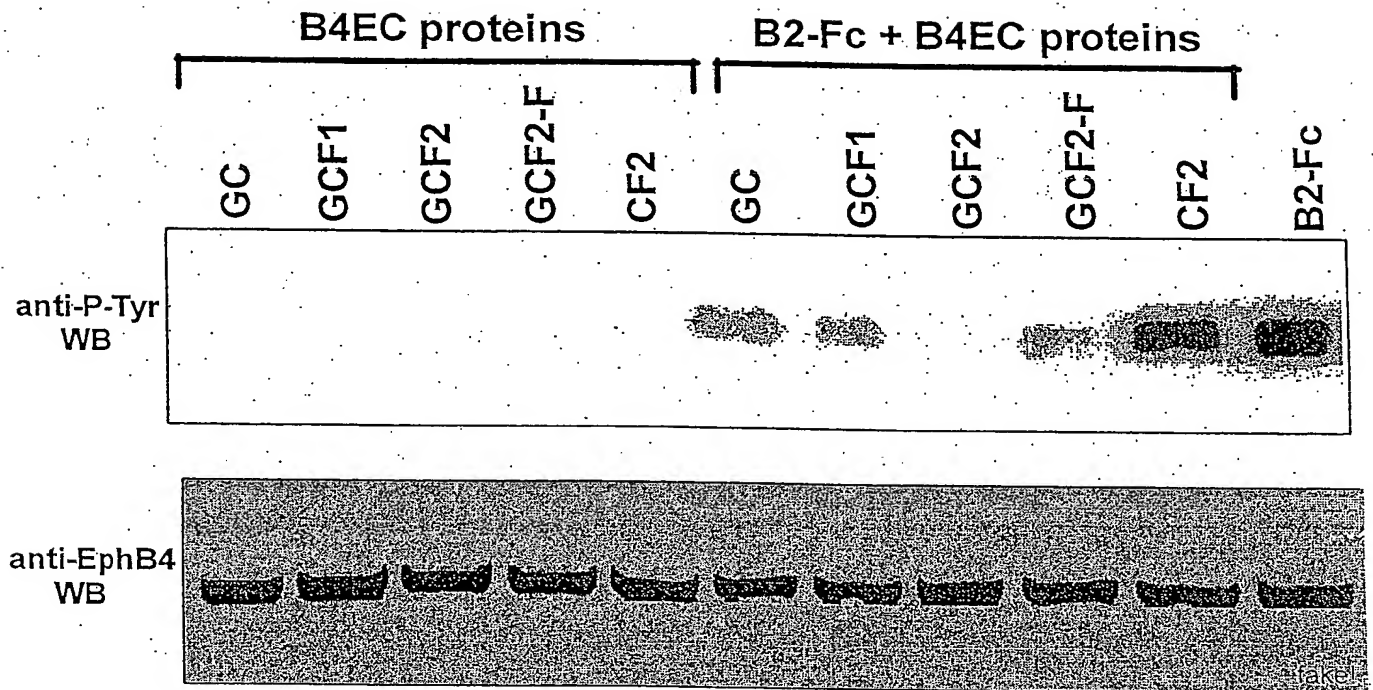
**Fig. 21**

## B4v3 inhibits invasion and tubule formation by endothelial cells in the Murine Matrigel assay



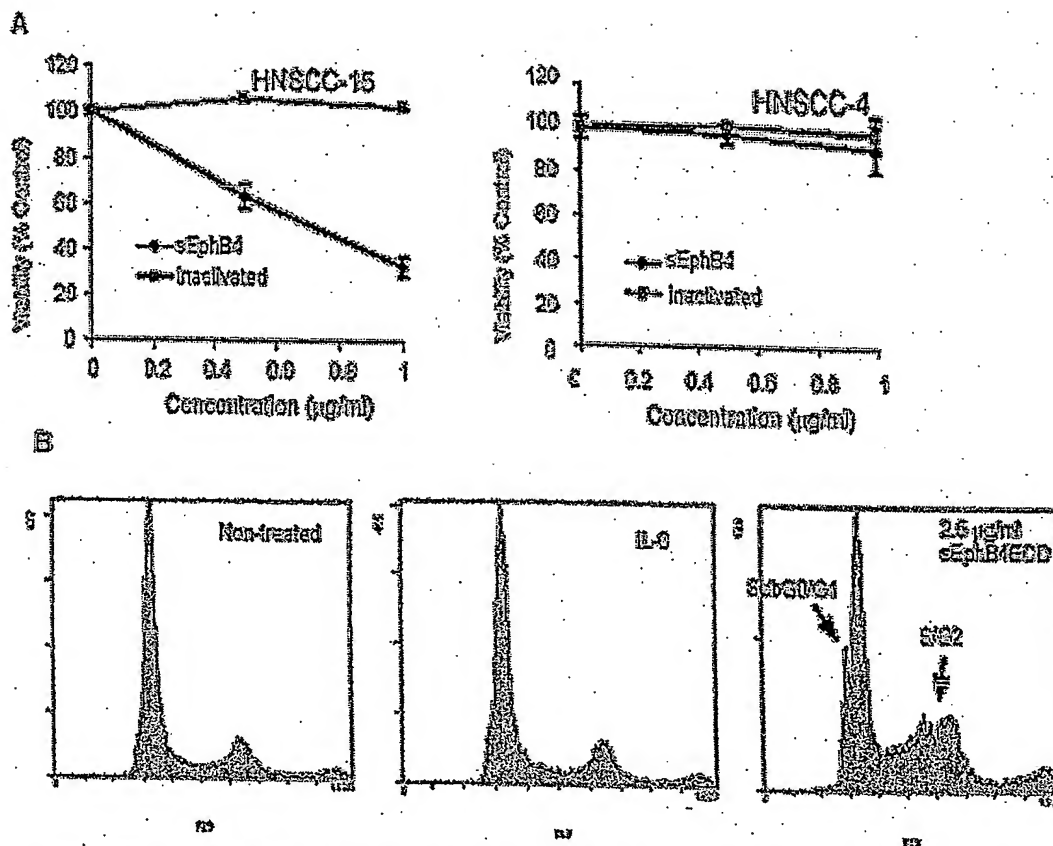
**B4v3 inhibits invasion and tubule formation by endothelial cells in the murine Matrigel assay.** B4v3 (50nM) was added to Matrigel solution containing ECGS (150ng/ml) and injected subcutaneously into BalbC nu/nu mice. After 6 days plugs were removed and processed in paraffin. Individual sections were either stained with hematoxylin (A) to detect total invading cells, photographed at 20X magnification or with Masson's Trichrome Top left of A B displays section of a Matrigel plug with no GF, top right of A displays section with B4IgG containing GF and lower left section contains GF, and lower right shows GF in the presence of B4v3. Significant invasion of endothelial cells is only seen in GF containing Matrigel. Top right displays an area with a high number of invaded cells induced by B4IgG, which signifies the dimeric form of B4v3. The left upper parts of the pictures correspond to the cell layers formed around the Matrigel plug from which cells invade toward the center of the plug located in the direction of the right lower corner. Total cells in sections of the Matrigel plugs were quantitated with Scion Image software. Results obtained from two experiments with duplicate plugs are displayed as mean values \_ S.D.

Fig. 22



Tyrosine phosphorylation of EphB4 receptor in PC3 cells in response to stimulation with EphrinB2-Fc fusion in presence or absence of EphB4-derived recombinant soluble proteins.

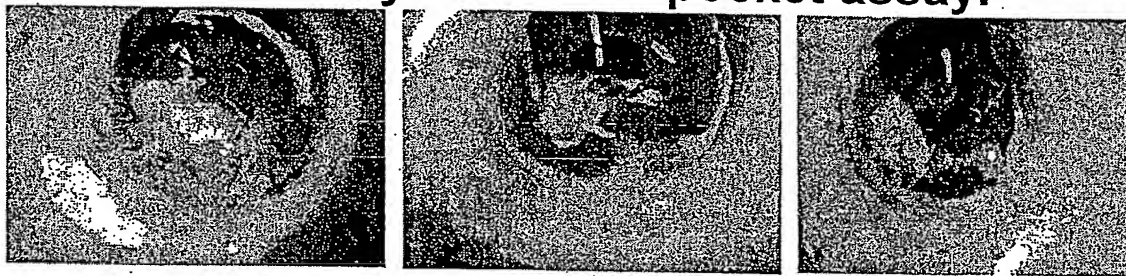
Fig. 23



Soluble EphB4ECD effects on viability and cell cycle. A) 3-day cell viability assay of two HNSCC cell lines. Cells were seeded on 48-well plates at equal densities and treated with 0, 0.5 or 1 µg/ml sEphB4ECD. Viability was determined on day 3 by MTT assay. Shown is the mean and SEM of triplicate samples. B) FACS analysis of cell cycle in HNSCC-15 cells treated as in A. It was previously determined that IL-6 had no inhibitory effect on viability. Treatment of these cells resulted in an accumulation in subG0/G1 and G2 phases as indicated by the arrows.

**Fig. 24**

**B4v3 inhibits neovascular response in a murine corneal hydon micropocket assay.**



**+GF**

**B4**

**-GF**

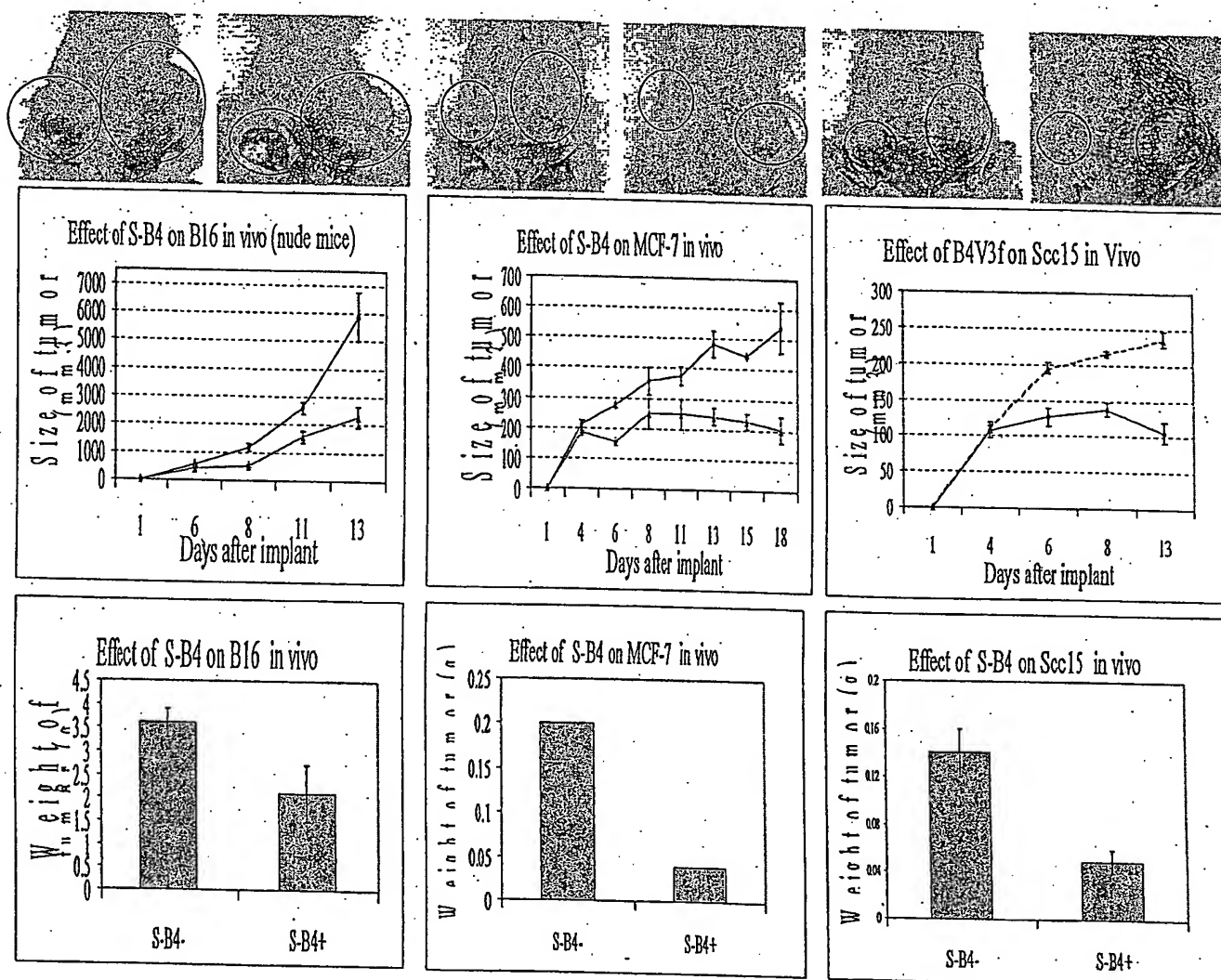
**+GF**

**B4v3 inhibits neovascular response in a murine corneal hydon micropocket assay.**

**B4v3** (180ng) was added to hydon and sucralfate (45ug) with or without basic fibroblast growth factor (bFGF) (100ng) and pellets formed. The pellets were selected and inserted into a micropocket into corneas of BalbC nu/nu mice. After 3 days pellets were removed and processed in freezing compound. Only the bFGR-sucralfate pellet, top left, induced an intense neovascular response originating from the limbal vessels and reaching the pellet on day 3 after implantation. Pellets containing bFGF and sucralfate with B4v3 and B4f, top right and bottom left respectively, did not produce an angiogenic response above background, on day 3 after implantation.

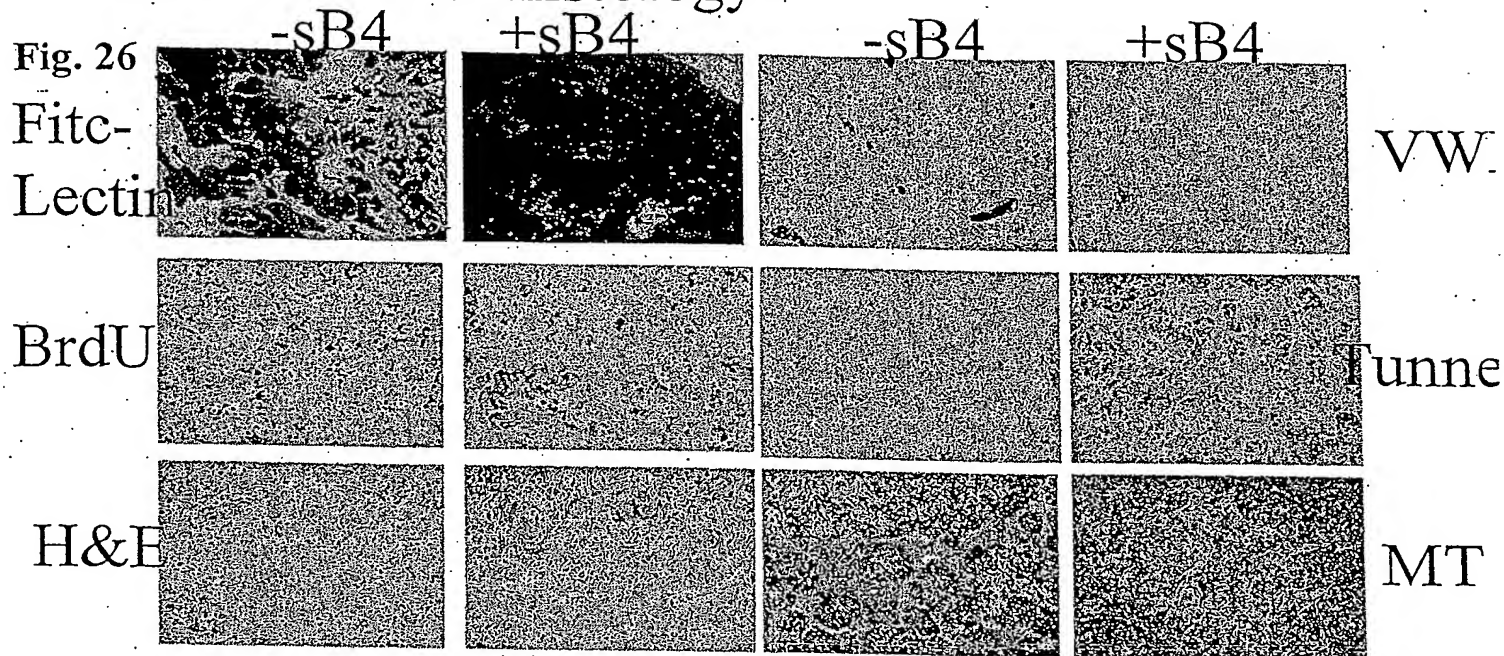


Fig. 25

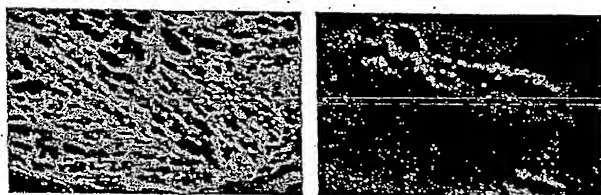


SCC15, B16, and MCF-7 co-injected with sB4v3 in the presence of matrigel and growth factors, inhibits the *in vivo* tumor growth of these cells. (A) sB4v3, 40mg per kg body weight were subcutaneously coinjected with  $\times 10^6$  cells in a matrigel preparation. The representative picture shows retarded tumor growth in the presence of sB4 (left flank) compared with PBS control treatment (right flank). (B) Treatment with sB4 significantly inhibited human SCC, B16, and MCF-7 tumor growth compared with control-treated mice ( $p < 0.05$ ). (C) Treatment with sB4 significantly inhibited tumor weight compared with control-treated mice ( $p < 0.05$ ). Data are expressed as mean  $\pm$  SEM. \* $p < 0.05$

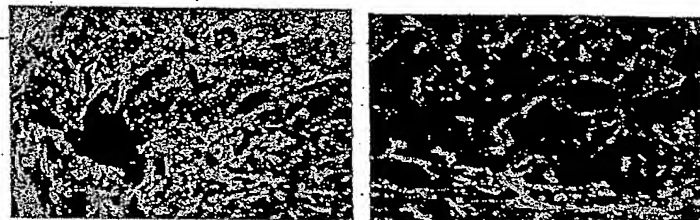
## SCC15 Tumor histology



B16



Mcf-7



Soluble EphB4 causes apoptosis, necrosis and decreased angiogenesis in three tumor types, B16 melanoma, SCC15, head and neck carcinoma, and MCF-7 Breast carcinoma. Tumors were injected premixed with Matrigel plus growth factors and soluble EphB4 subcutaneously. After 10 to 14 days, the mice were injected intravenously with fitc-lectin (green) to assess blood vessel perfusion. Tumors treated with control PBS displayed abundant tumor density and a robust angiogenic response. Tumors treated with sEphB4 displayed a decrease in tumor cell density and a marked inhibition of tumor angiogenesis in regions with viable tumor cells, as well as tumor necrosis and apoptosis.



Figure 27

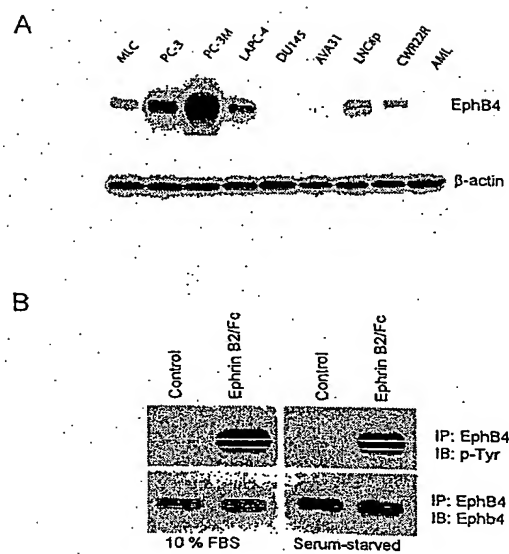
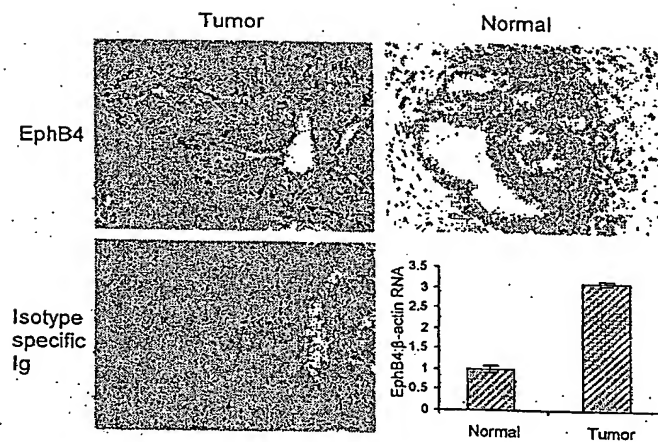


Figure 28



EPHB4 staining in prostate tissues array		
	negative	positive
Normal (n = 20)	17	3
Tumor (n = 32)	8	24

$P = 3.8 \times 10^{-5} \chi^2$  analysis

Figure 29

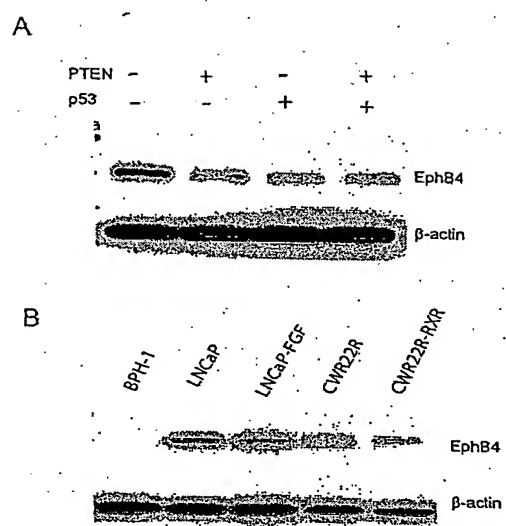


Figure 30

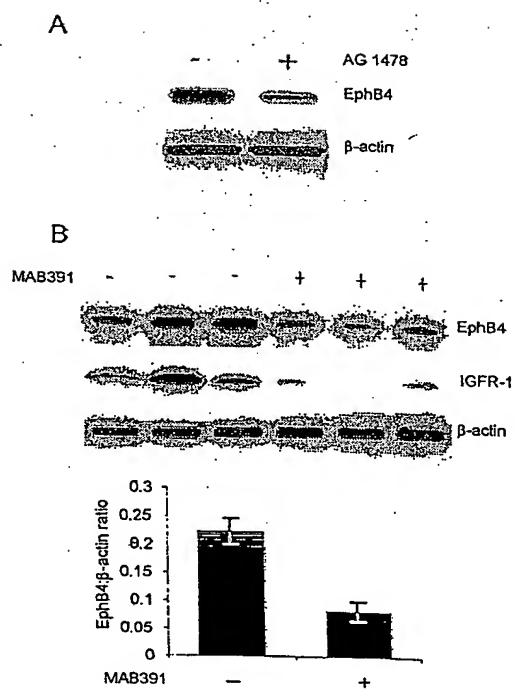


Figure 31

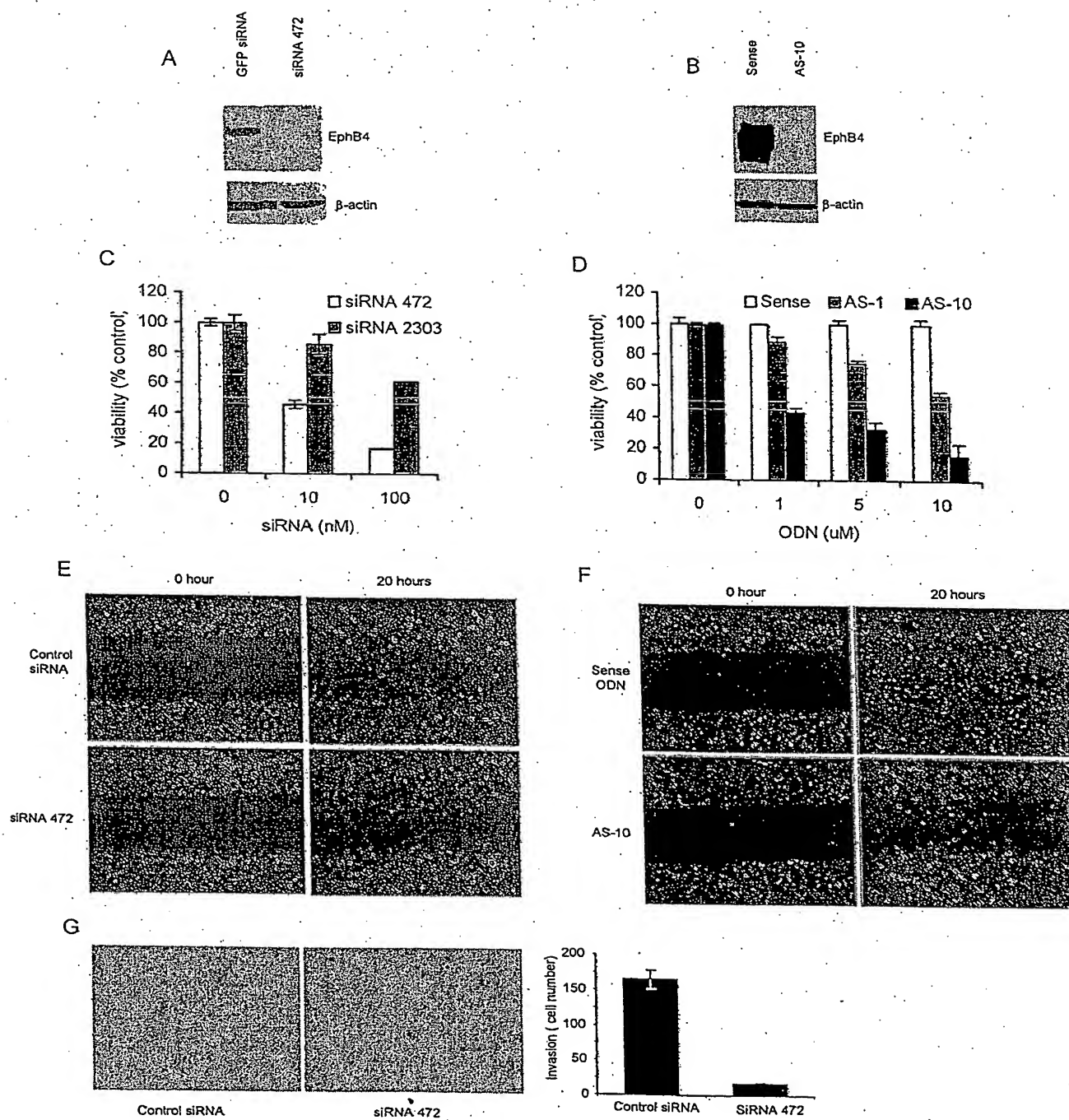
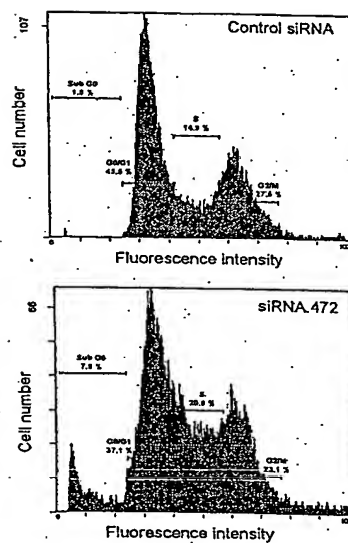
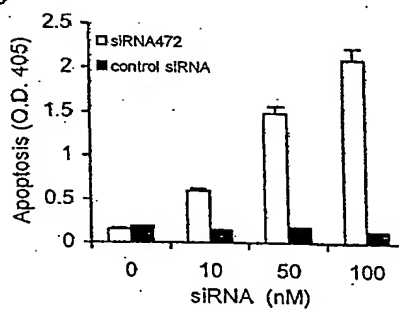


Figure 32

A

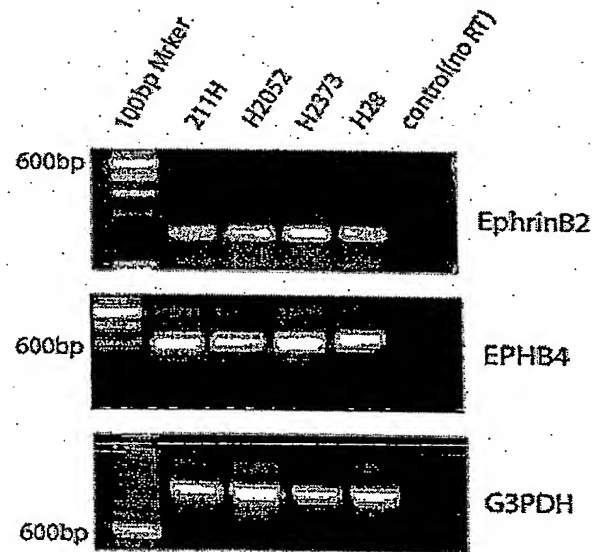


B



# Figures and Legends

A.



B.

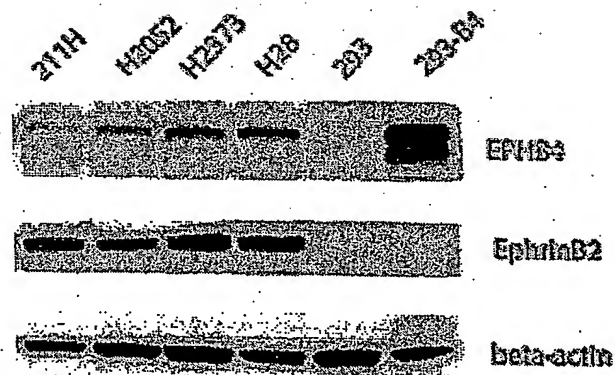


Fig. 33

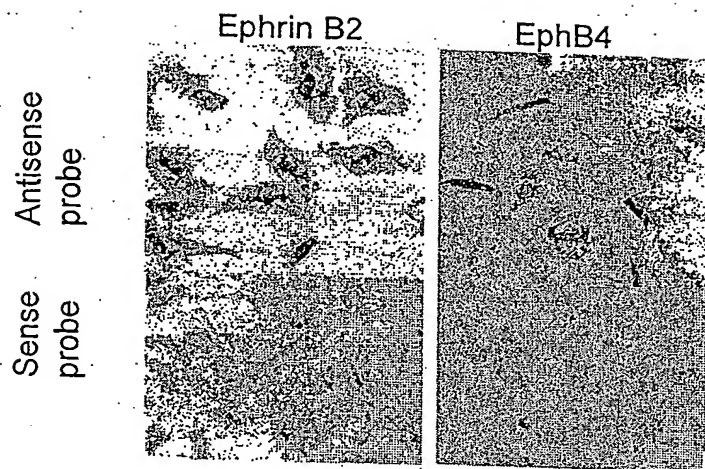


Fig. 34. Expression of ephrin B2 and EphB4 by in situ hybridization in mesothelioma cells. NCI H28 mesothelioma cell lines cultured in chamber slides hybridized with antisense probe to ephrin B2 or EphB4 (top row). Control for each hybridization was sense (bottom row). Positive reaction is dark blue cytoplasmic stain.



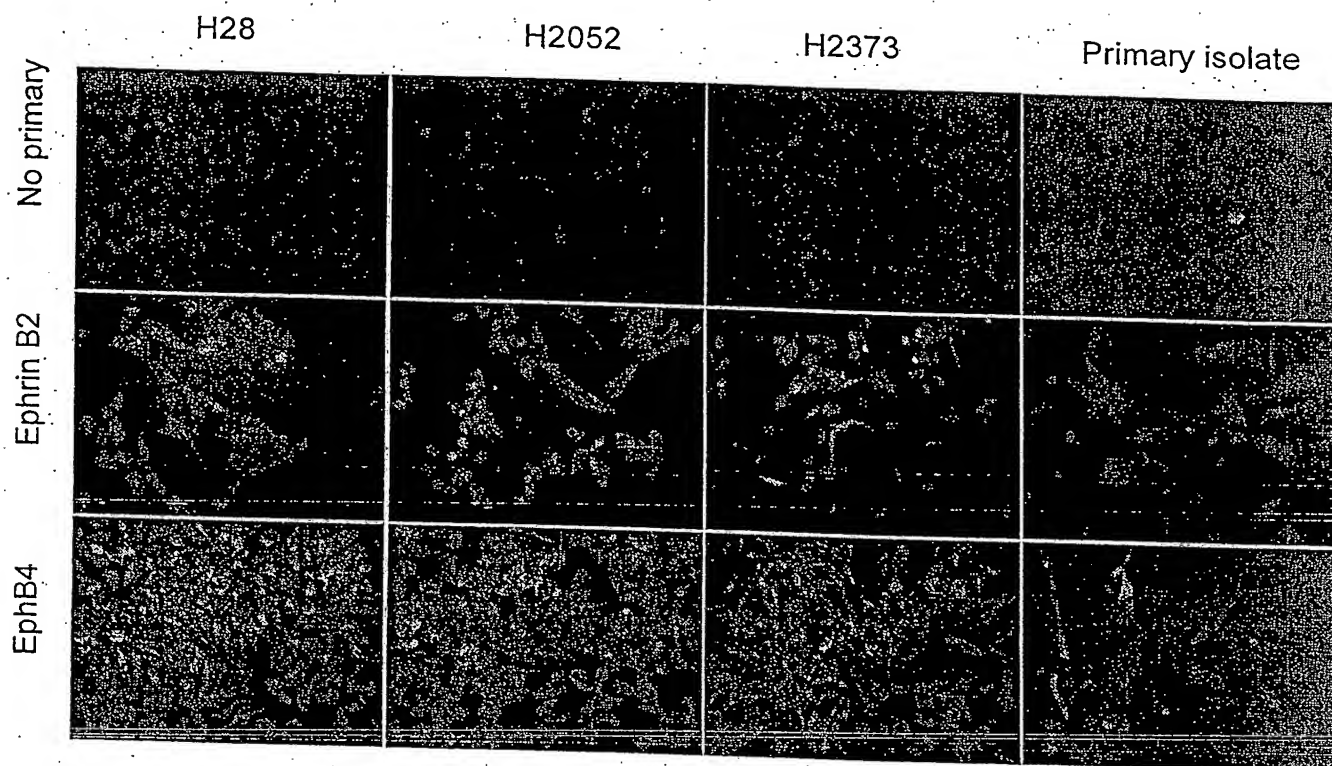


Fig. 35. Cellular expression of EphB4 and ephrin B2 in mesothelioma cultures. Immunofluorescence staining of primary cell isolate derived from pleural effusion of a patient with malignant mesothelioma and cell lines NCI H28, NCI H2373, and NCI H2052 for ephrin B2 and EphB4. Green color is positive signal for FITC labeled secondary antibody. Specificity of immunofluorescence staining was demonstrated by lack of signal with no primary antibody (first row). Cell nuclei were counterstained with DAPI (blue color) to reveal location of all cells. Shown are merged images of DAPI and FITC fluorescence. Original magnification 200X.

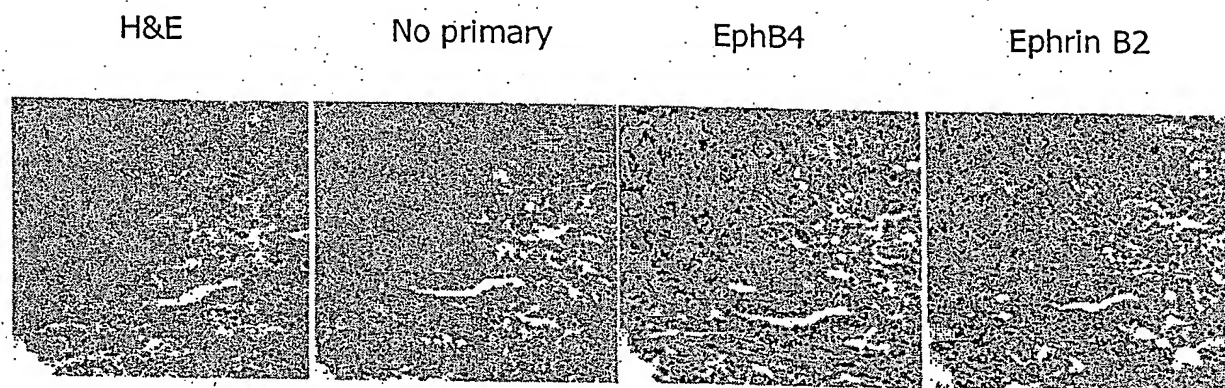
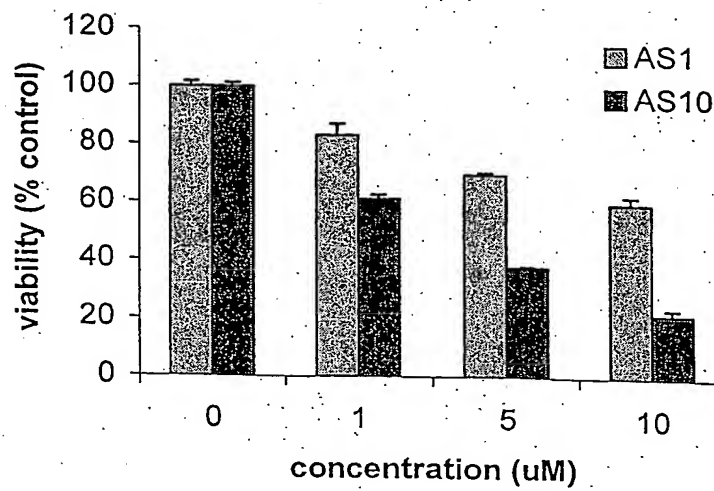


Fig. 36. Expression of ephrin B2 and EphB4 in mesothelioma tumor. Immunohistochemistry of malignant mesothelioma biopsy. H&E stained section to reveals tumor architecture; bottom left panel is background control with no primary antibody. EphB4 and ephrin B2 specific staining is brown color. Original magnification 200X.

A.

Effect of EPHB4 antisense ODN  
on the growth of H28 cells



B.

Effect of EPHB4 siRNA 472 on the growth of H28 cells

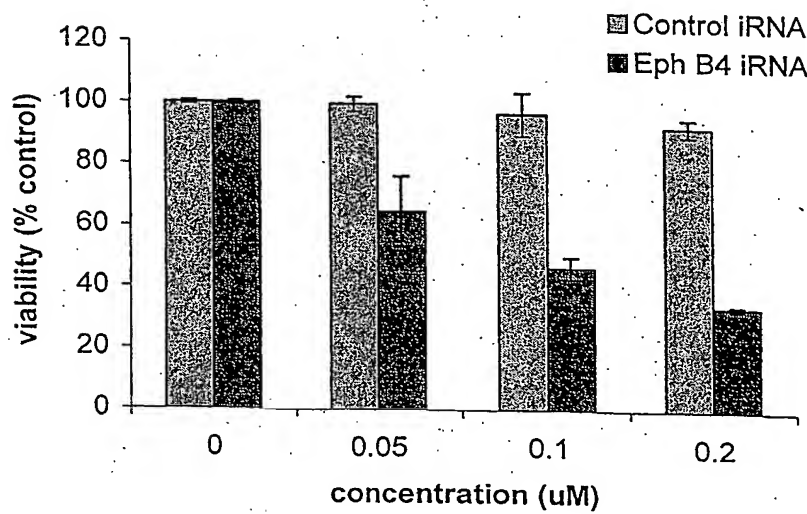
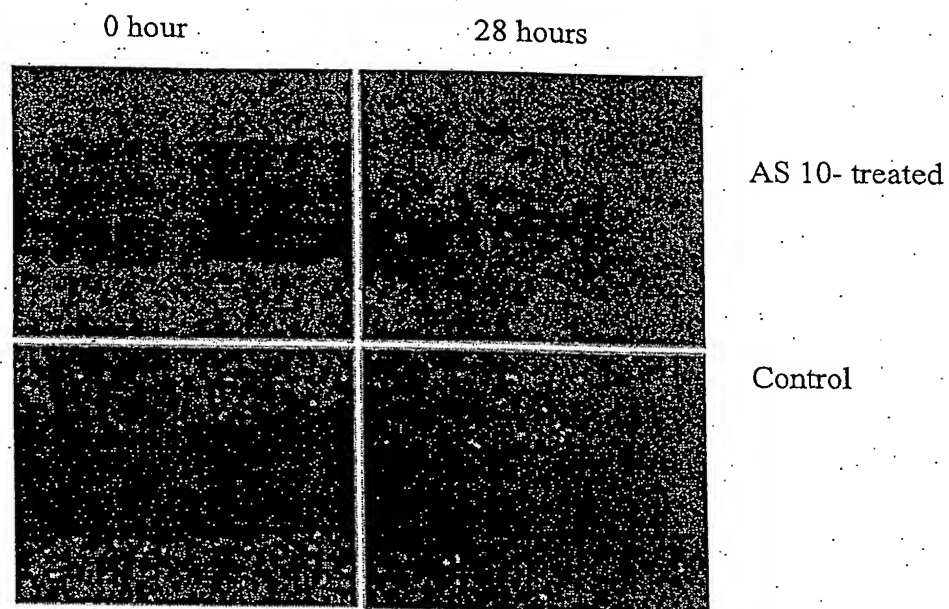


Fig. 37

A.



B.

Migration Study of H28 with siRNA472(Boyden Chamber)

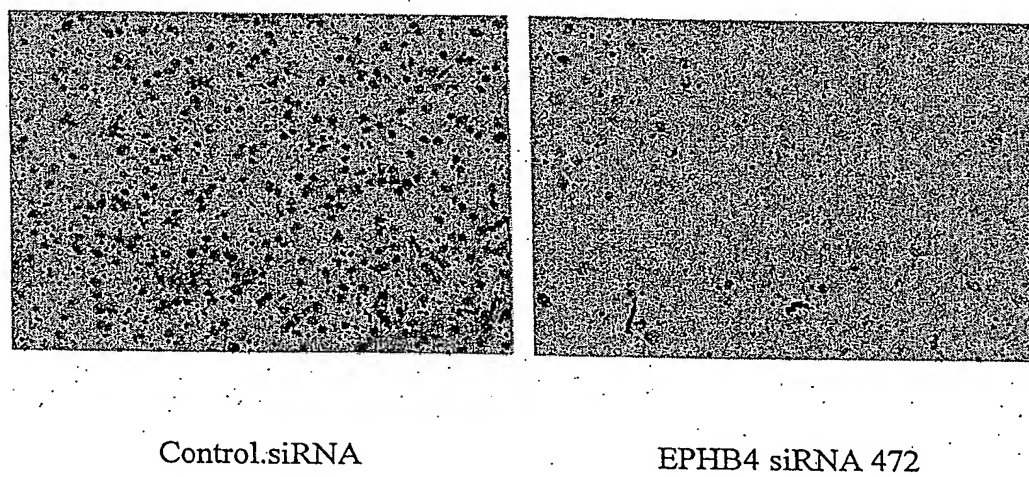


Fig. 38

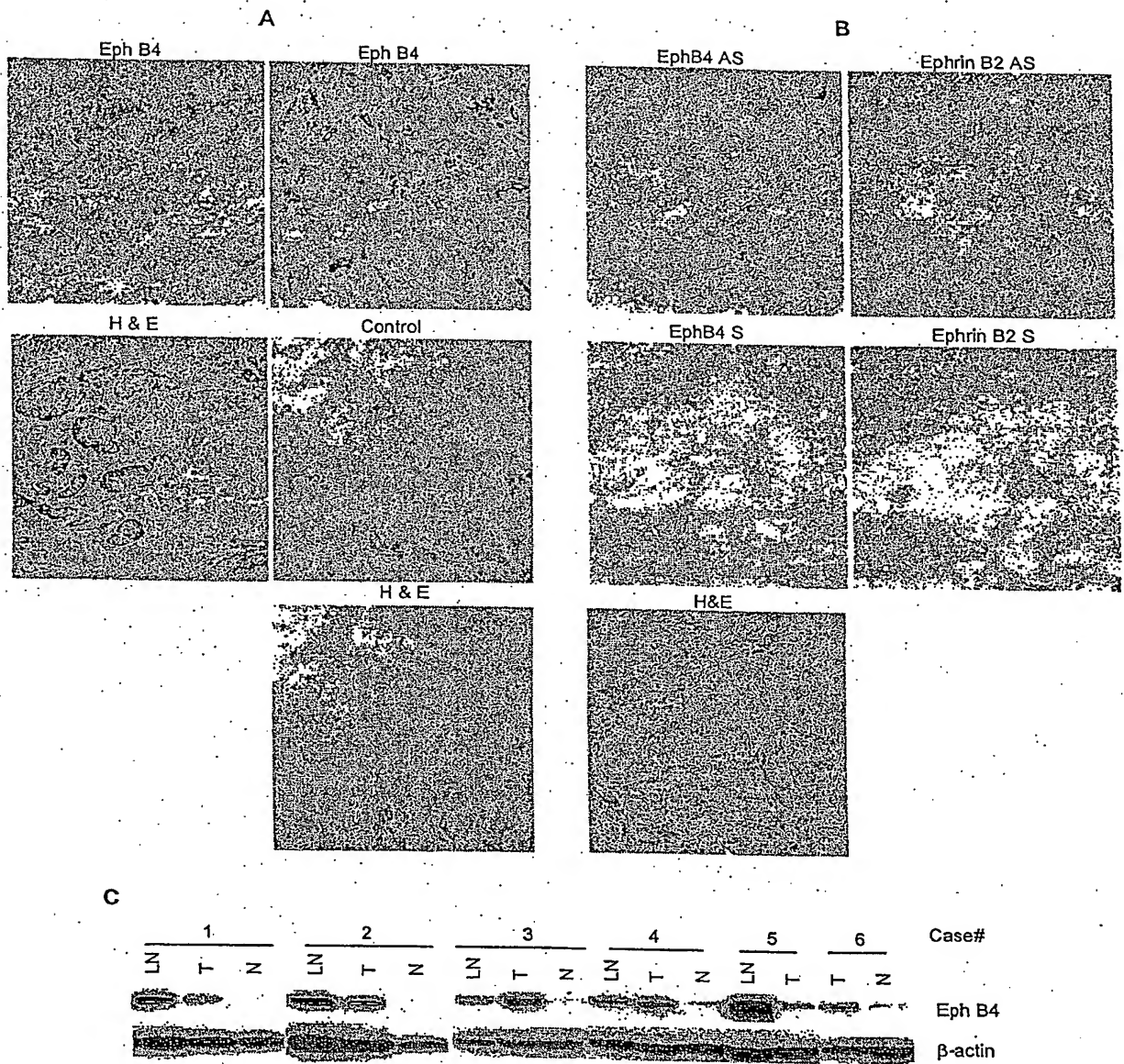


Fig. 39

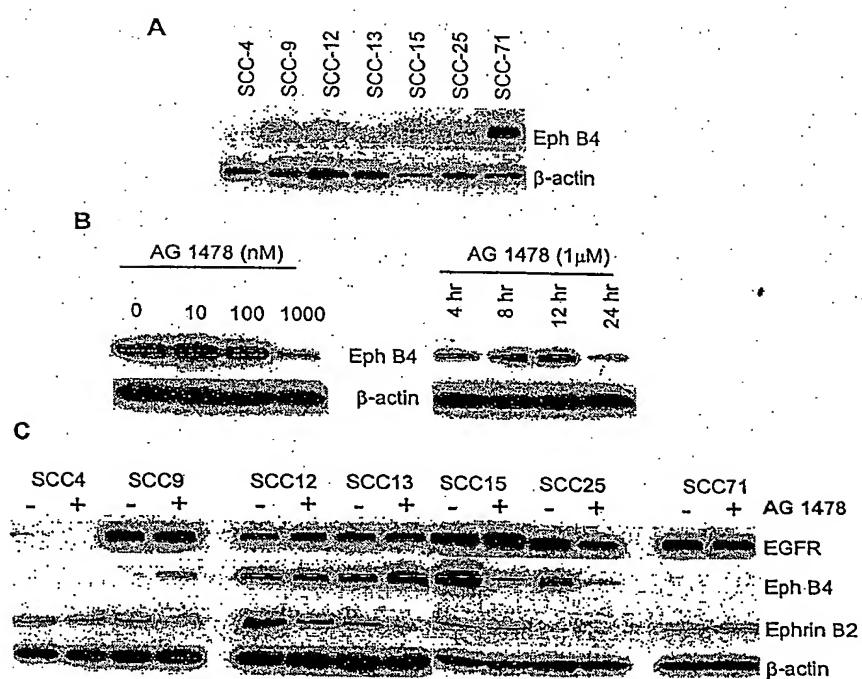


Fig. 40

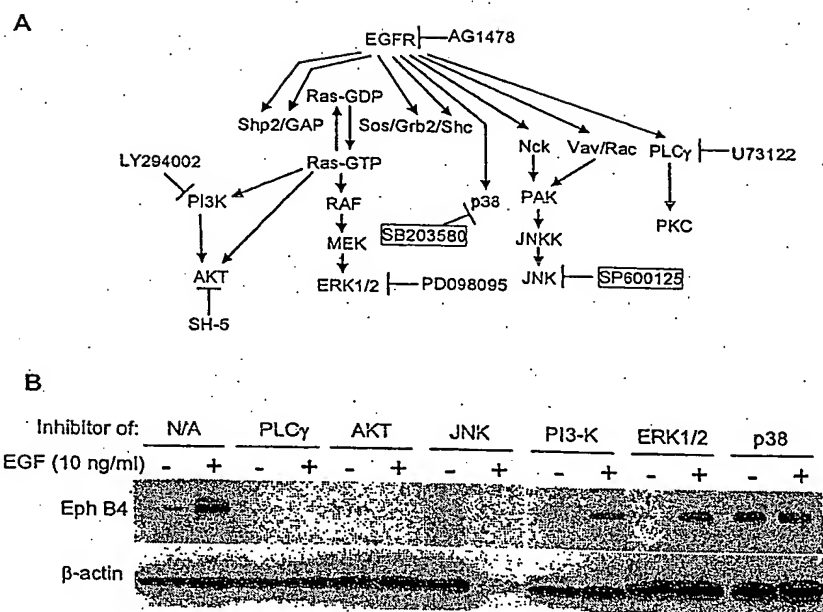


Fig. 41

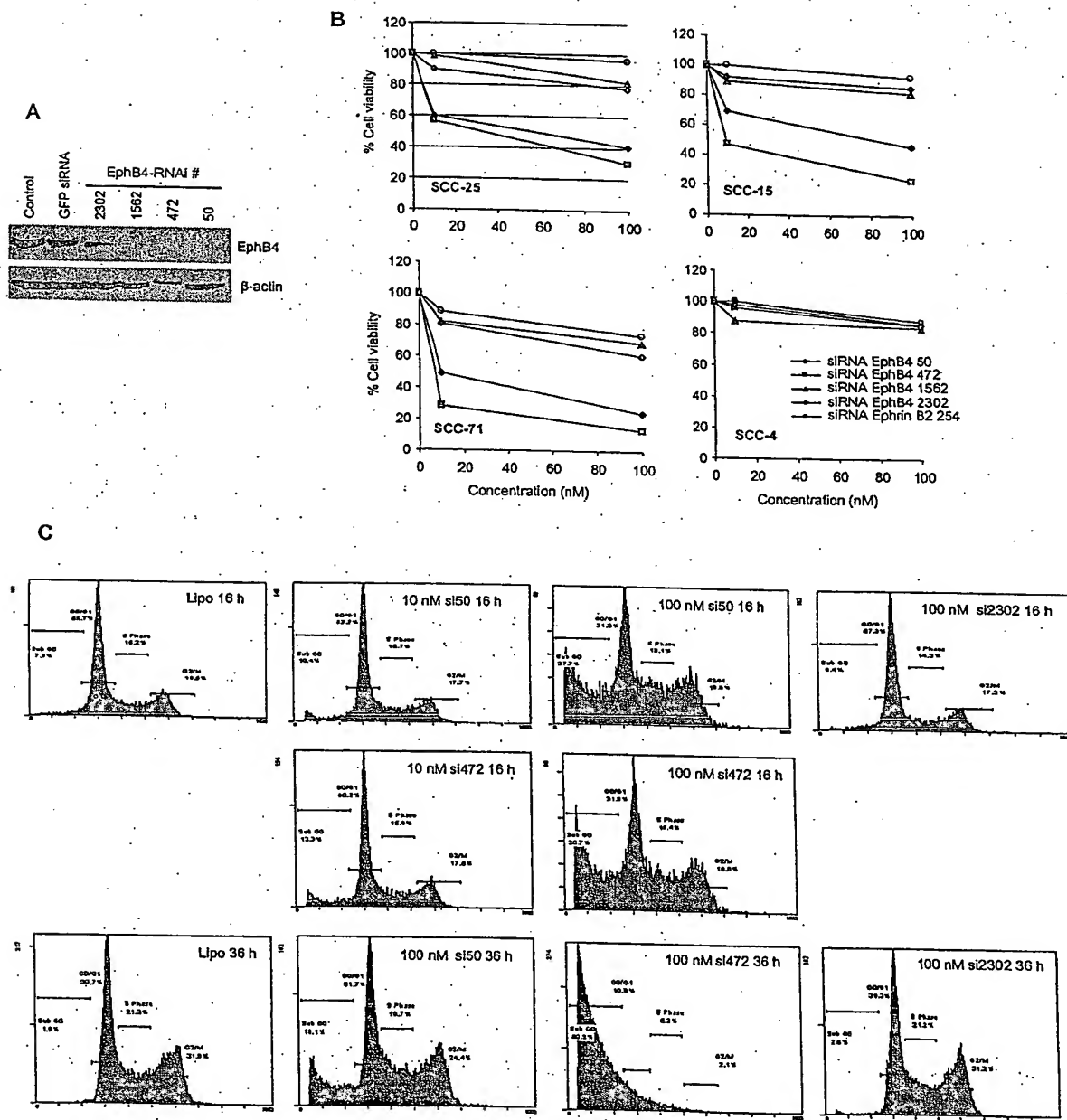


Fig. 42



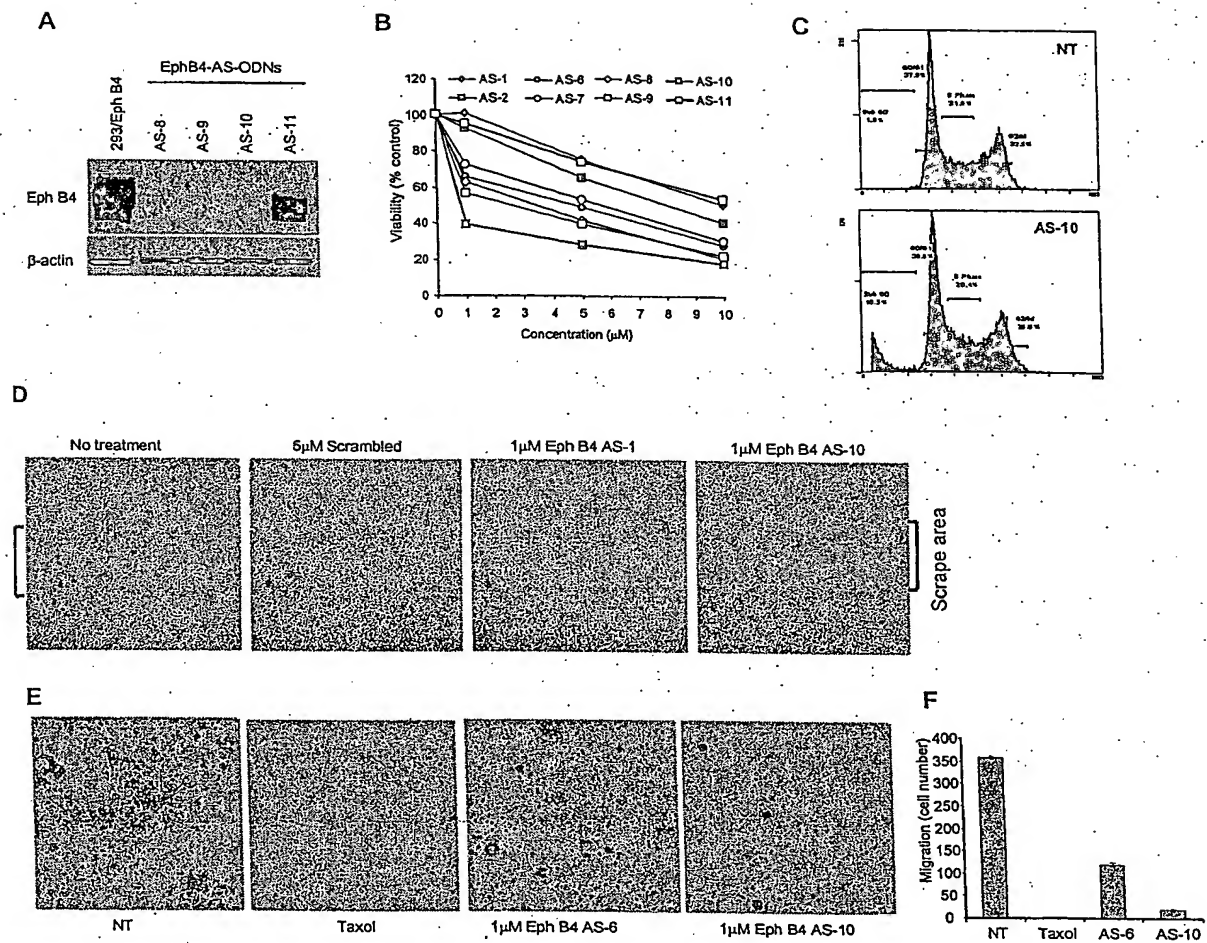


Fig. 43

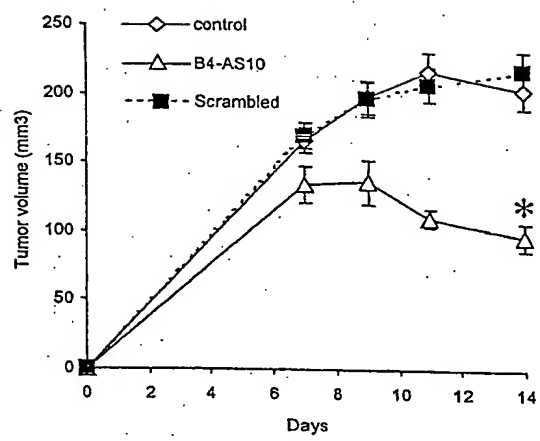


Fig. 44

Fig. 45

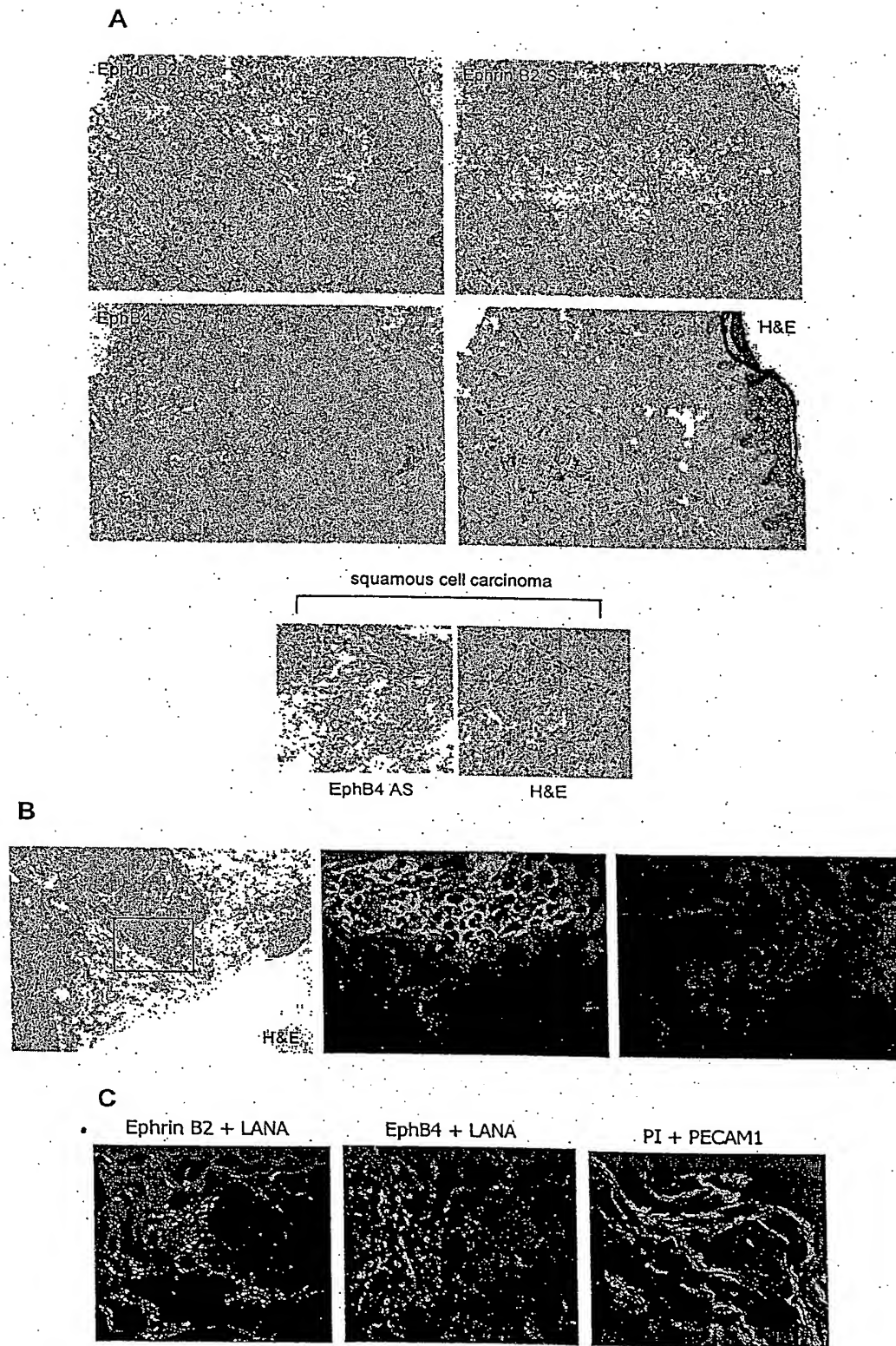


Fig. 46

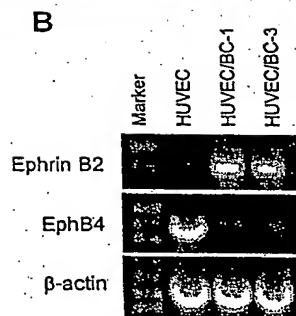
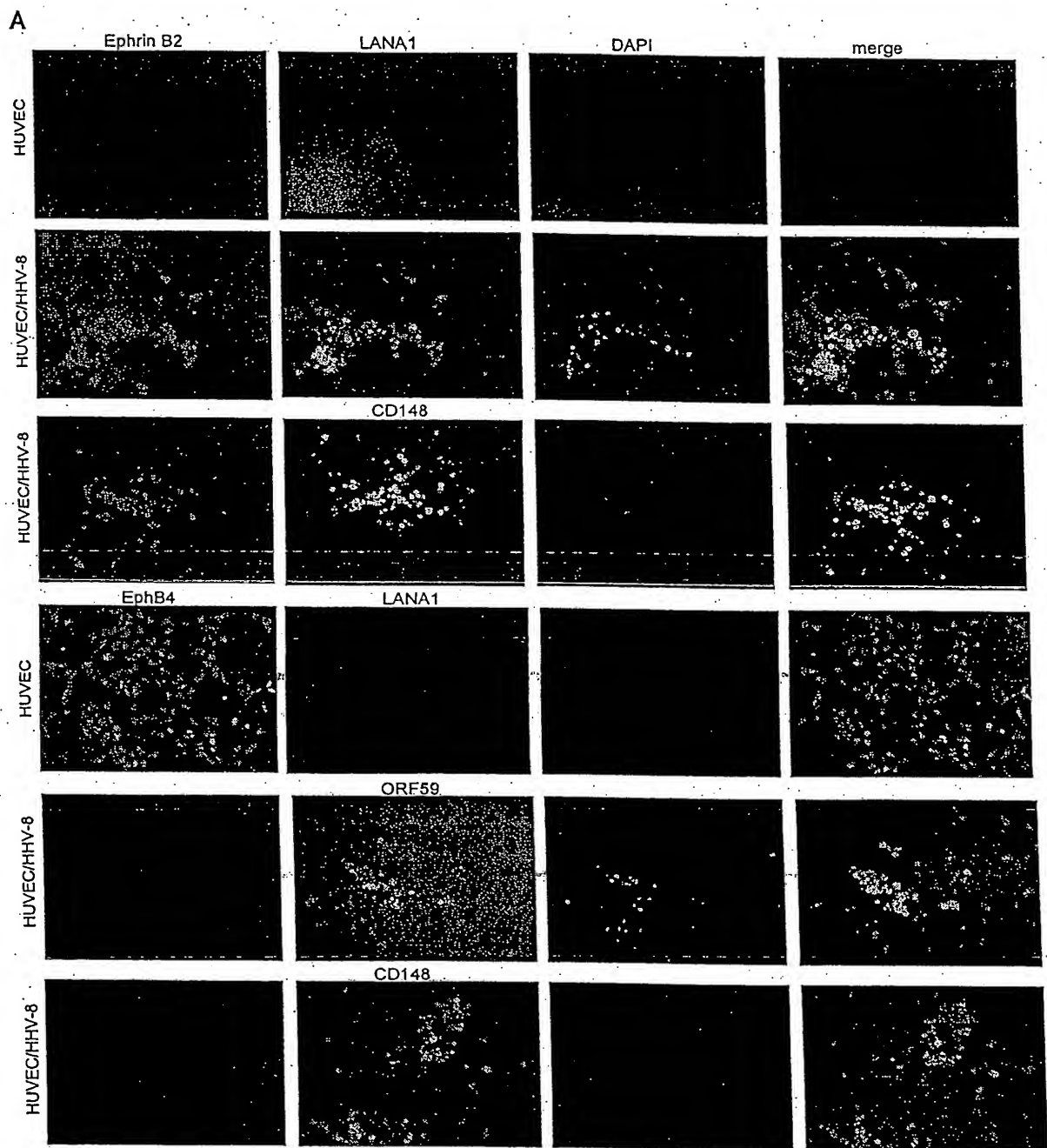
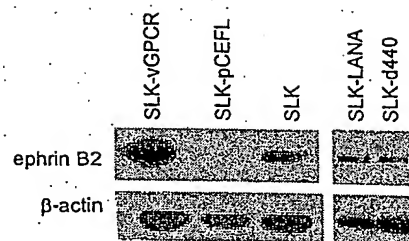
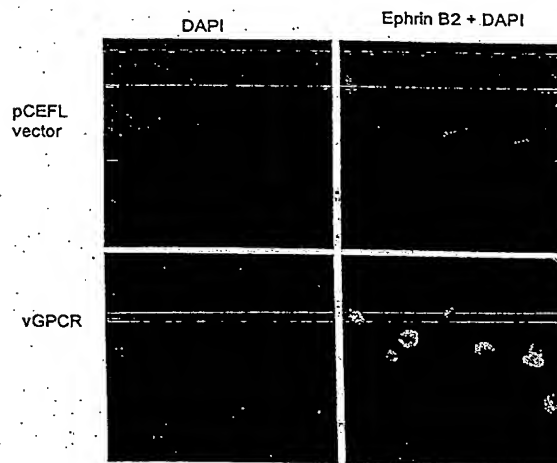


Fig. 47

**A**



**B**



**C**

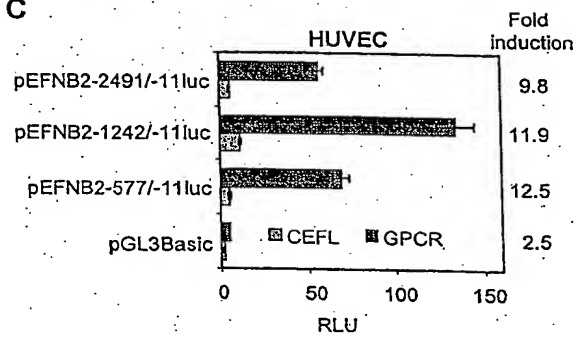


Fig. 48

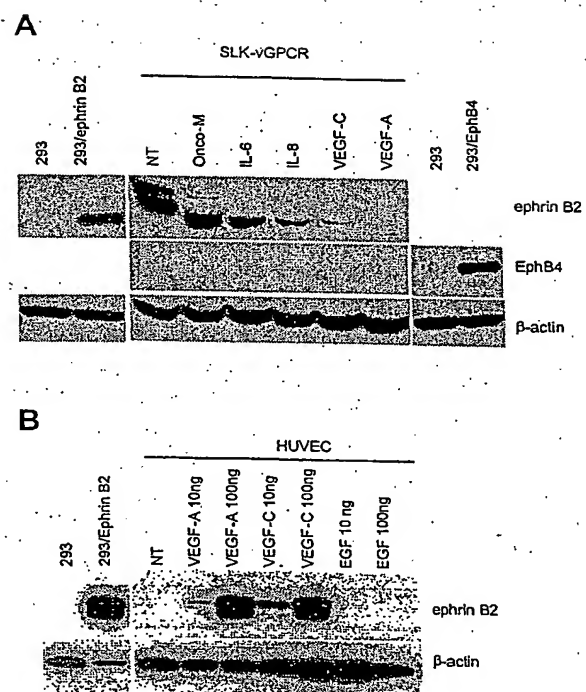


Fig. 49

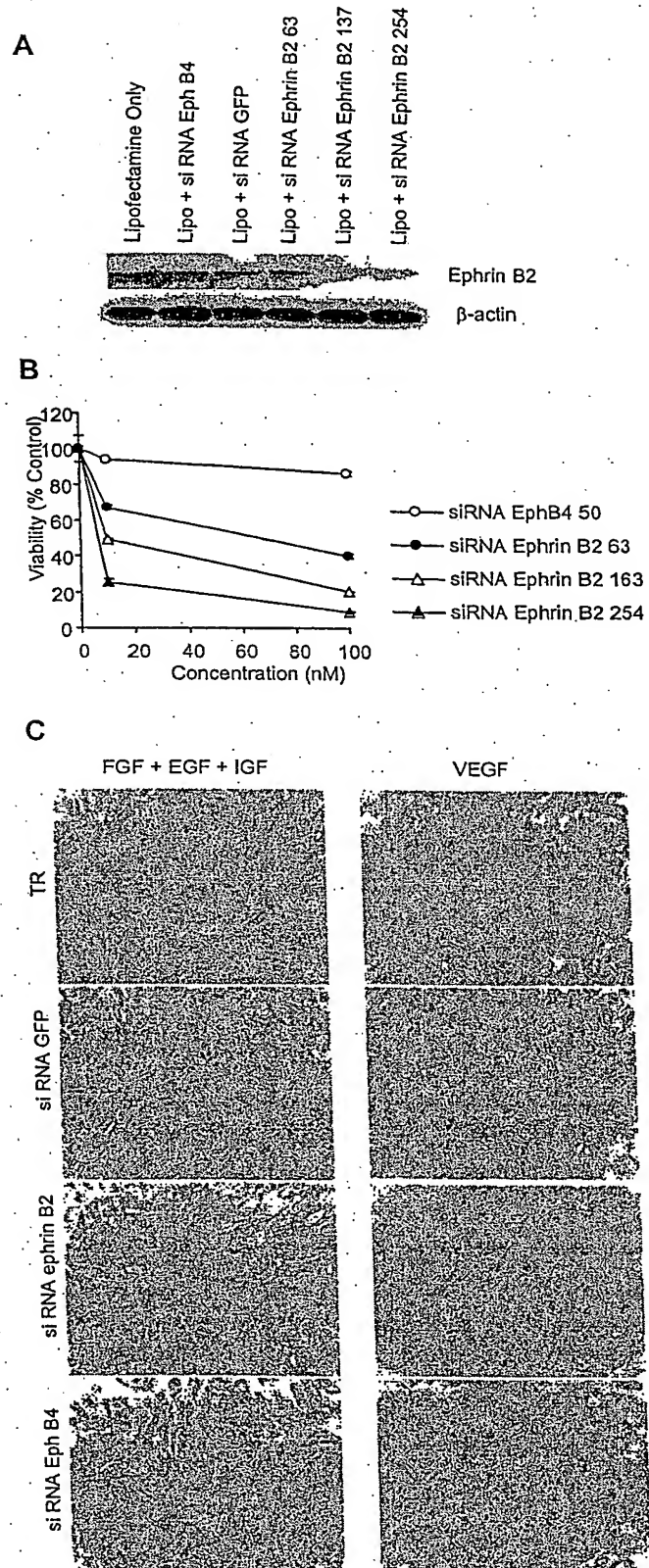


Fig. 50

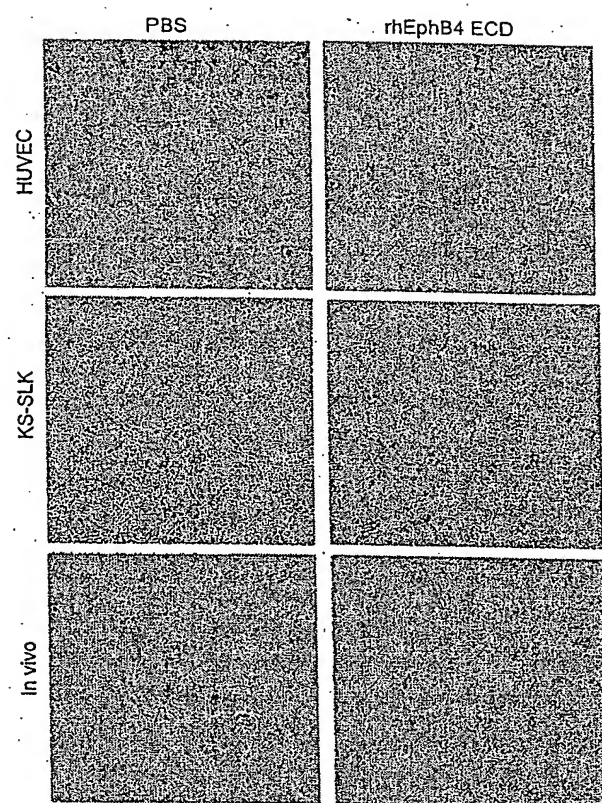
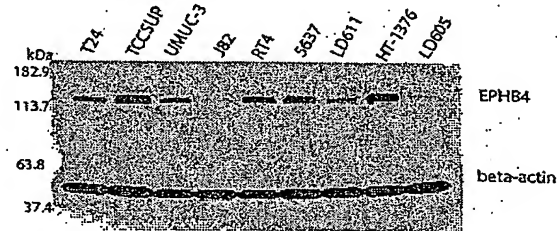




Fig. 51

### Expression of EPHB4 in bladder cancer cell lines



### Regulation of EPHB4 expression by EGFR signaling pathway

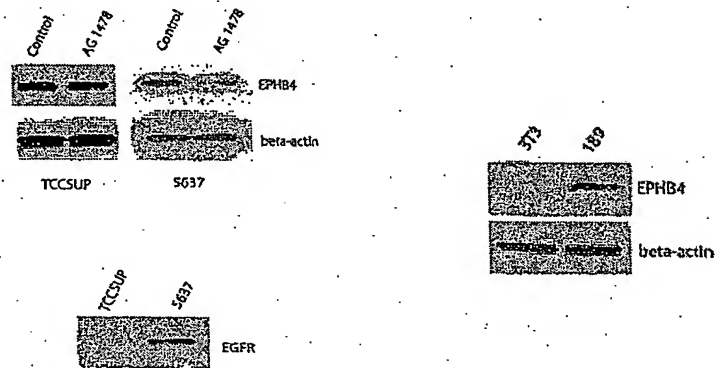


Fig. 52

Transfection of p53 inhibit the expression of EPHB4 in 5637 cell

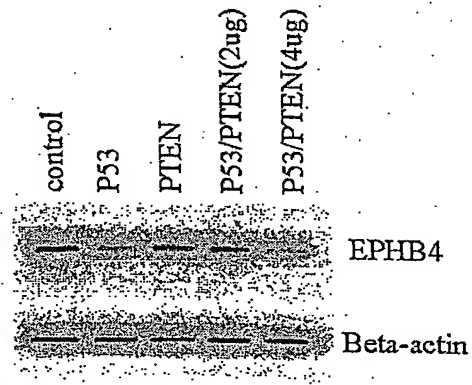
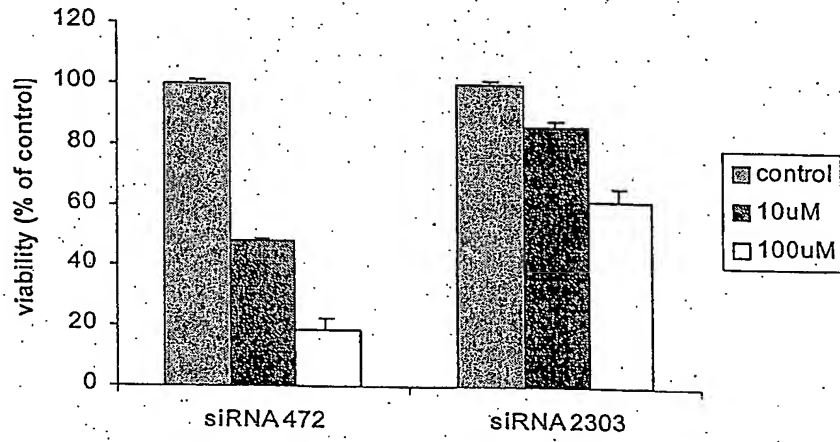


Fig. 53

Growth inhibition of bladder cancer cell line(5637) upon treatment with EPHB4 siRNA 472



# Apoptosis Study of 5637 cells transfected with EPHB4 siRNA 472

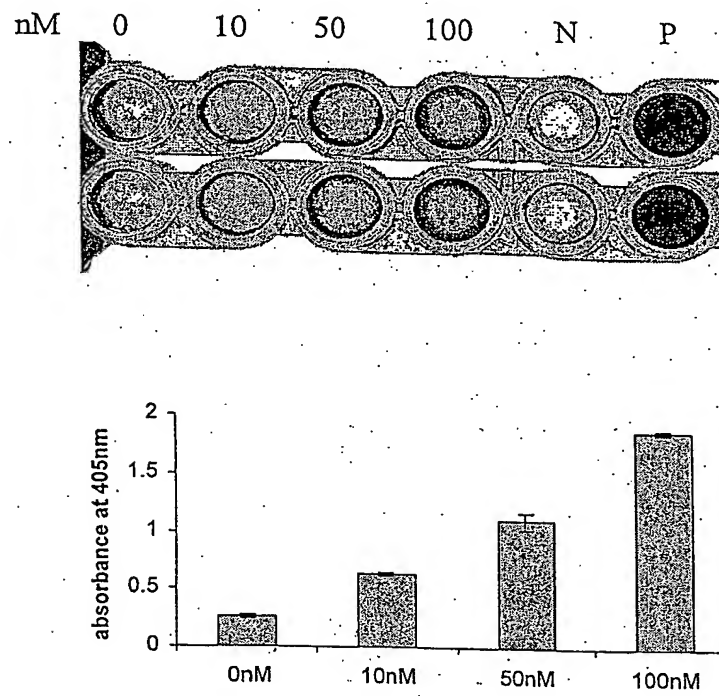


Fig. 54

Cell migration study of 5637 cell upon treatment with AS10(10uM)

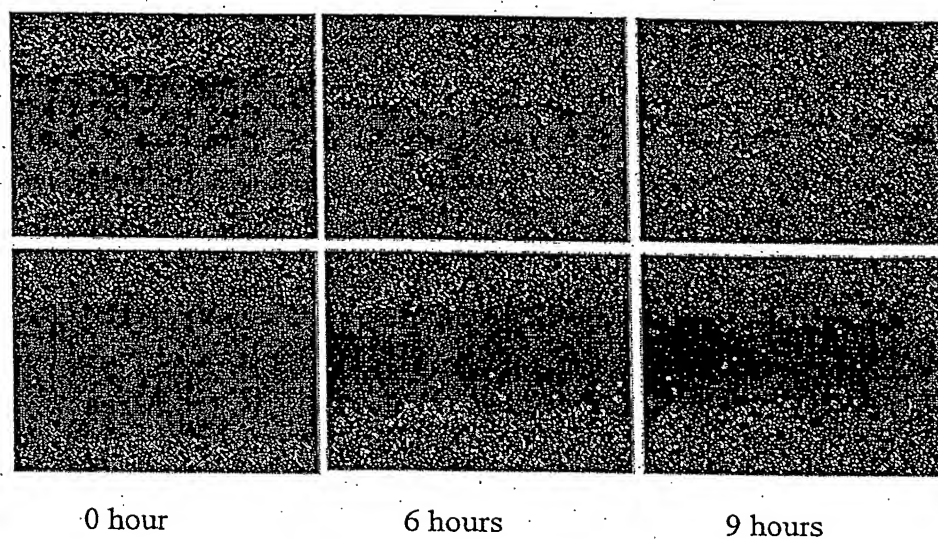
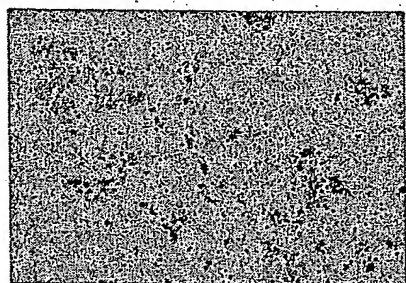
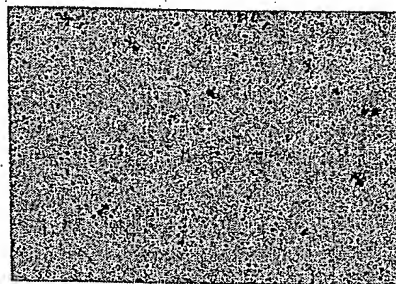


Fig. 55

Invasion study of 5637 cell transfected with siRNA 472 or control siRNA



Control



siRNA472

Co  
ntr  
ol

si  
R  
N  
A4  
72

Fig. 56

Fig. 57

# Comparison of mAb's by G250 and in Pull Down Assay

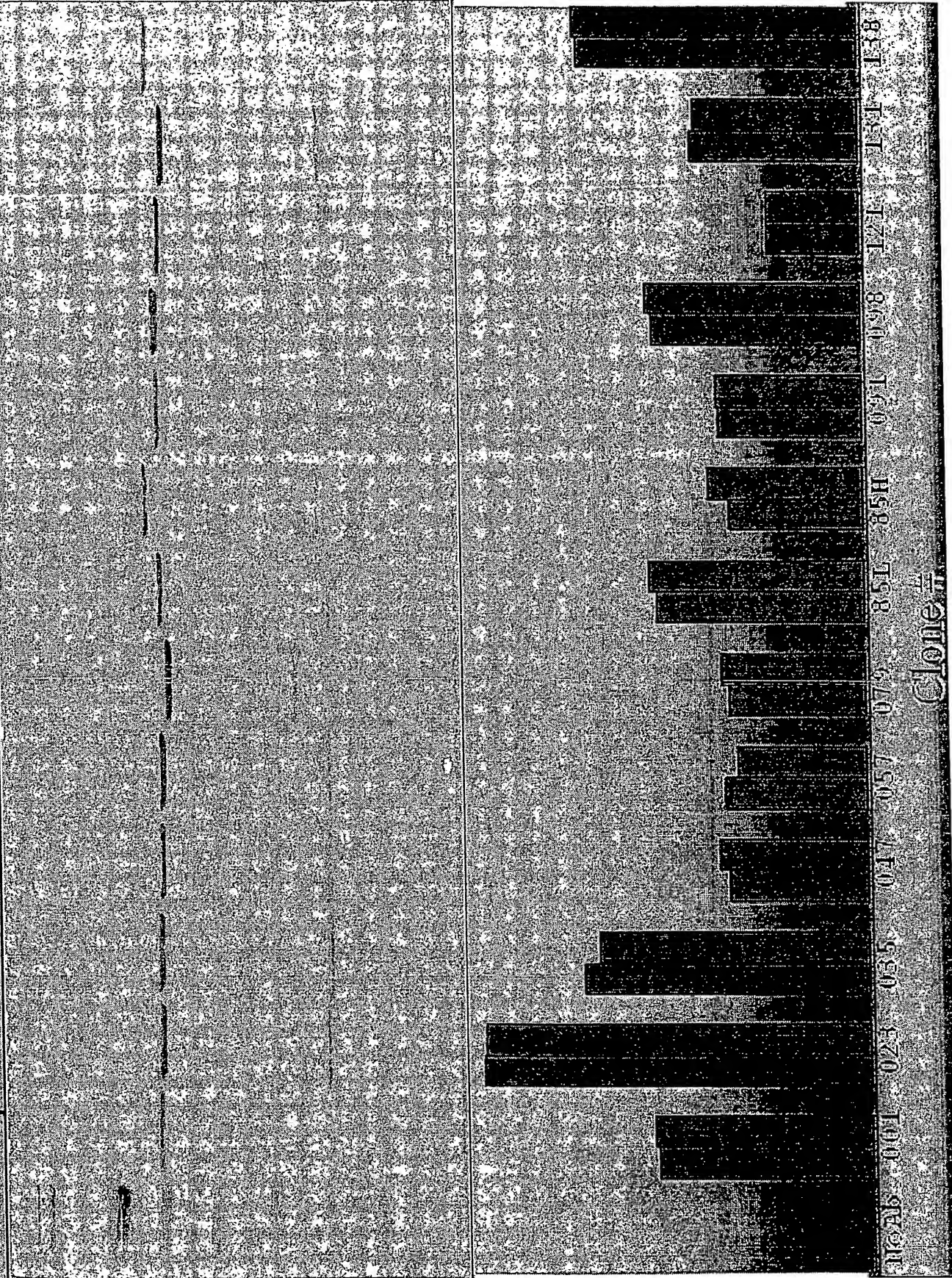


Fig. 58

## SCC15/MG xenograft Tumor regression

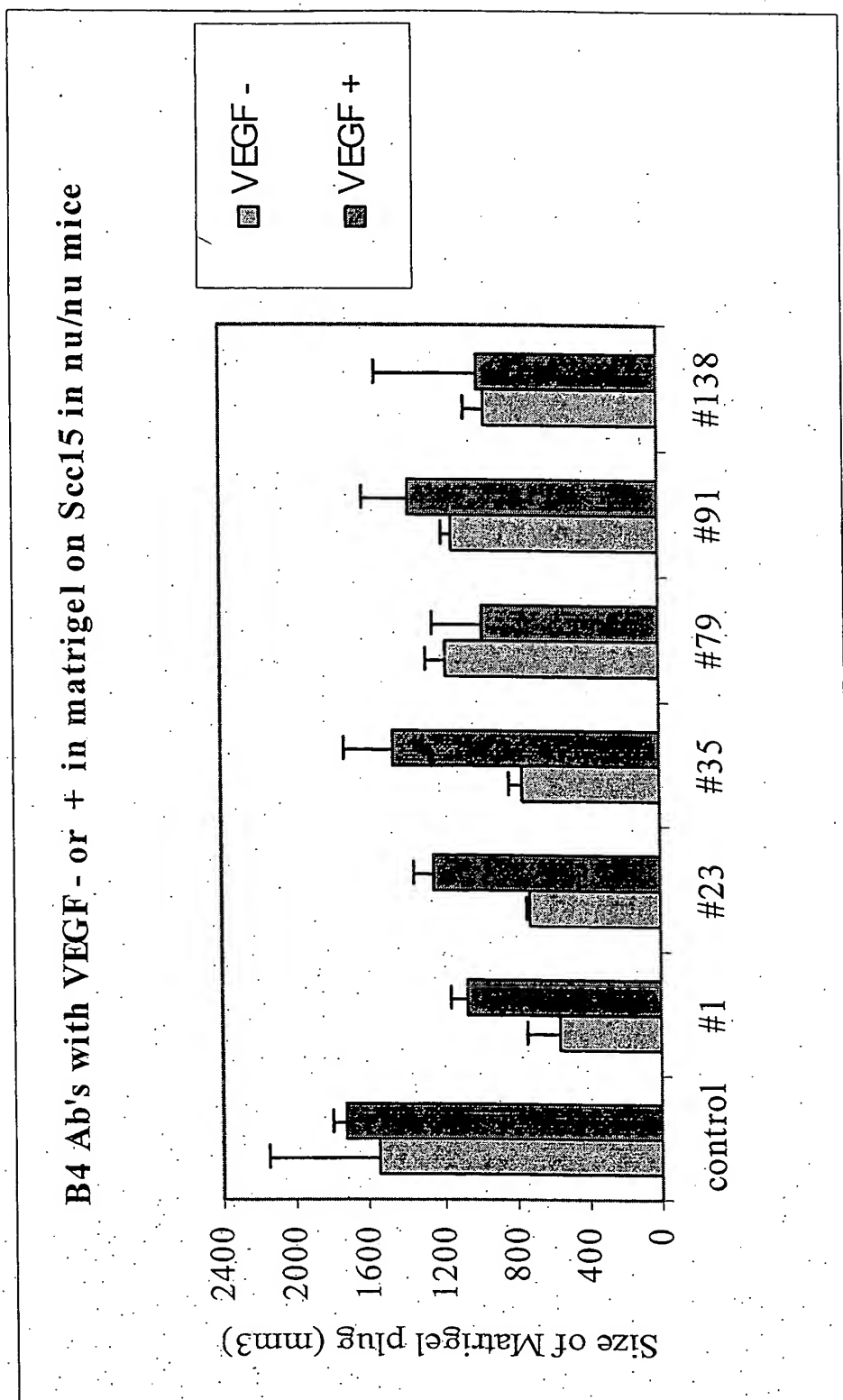
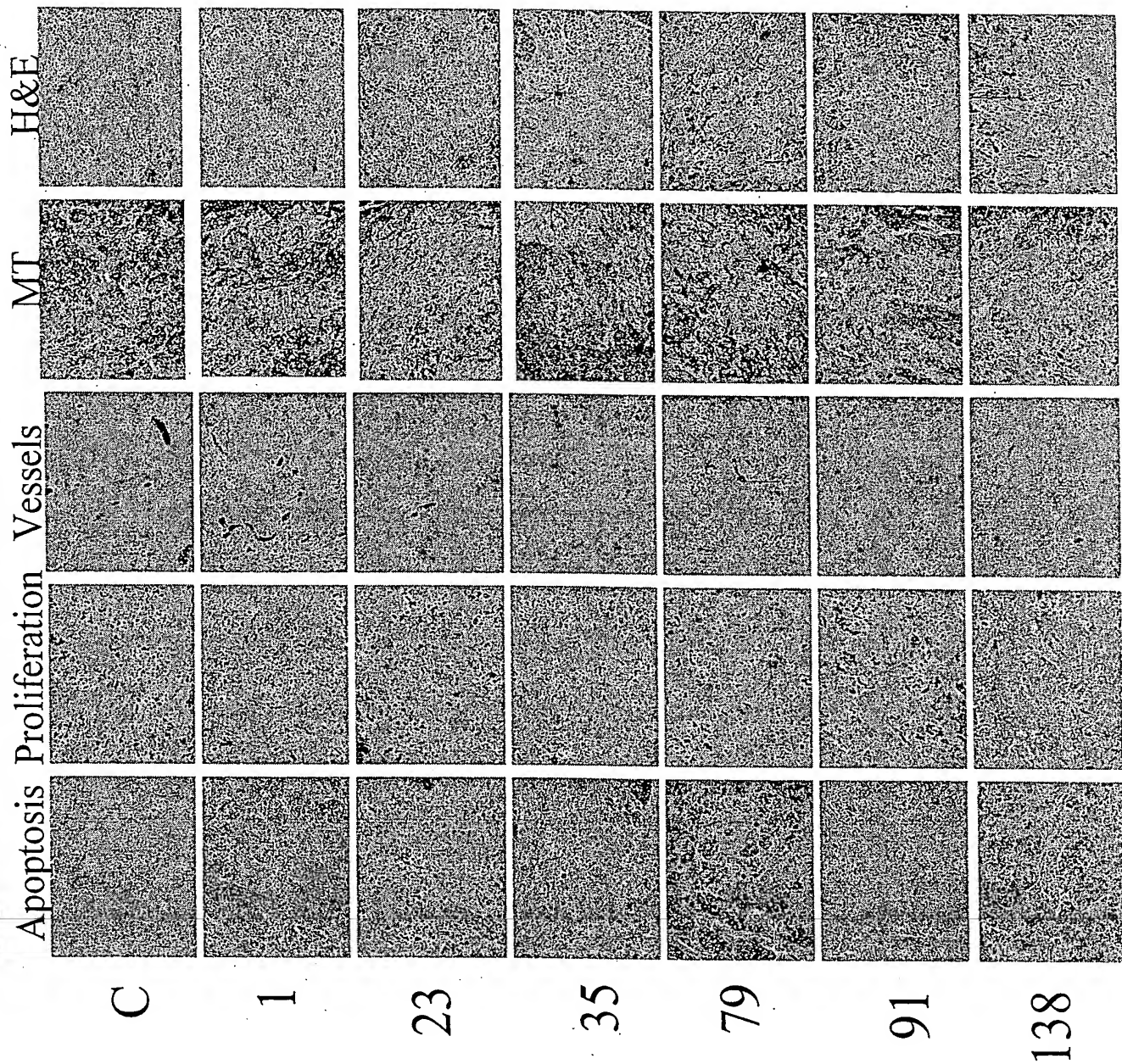




Fig. 59

# Effect of B4 antibodies on SCC15 Tumor histology



# SCC15/IP, SC B4 Ab treated xenograft Tumor regression

Fig. 60

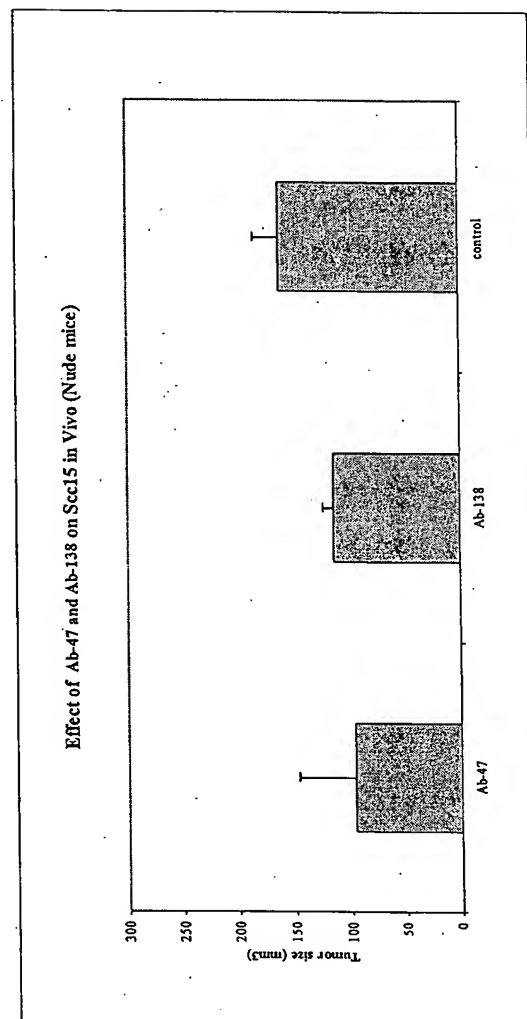
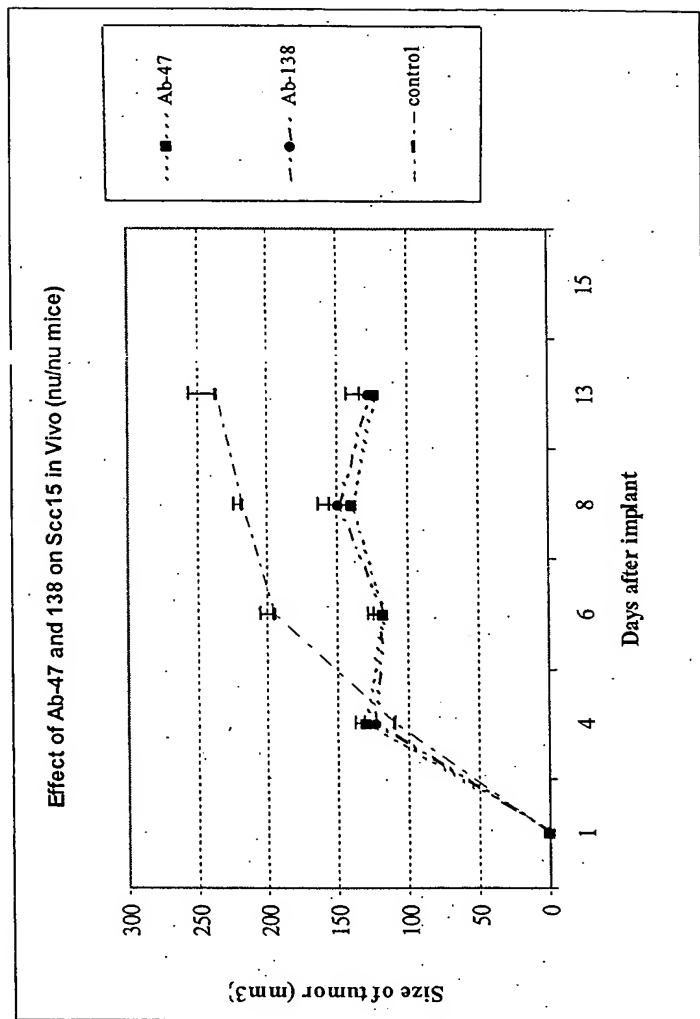


FIGURE 61 EphB4 gene

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Fig. 61(b)

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Fig. 61(c)

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8281 aggtggacc tcacatggcc cccatctctc ctgggcttct tccctttgtc cctggcatgc
8341 ttgtccctag cccggaggaa catgtgggac ccactgtctc caaggcaaga gtcagcatg
8401 gctgctggtg cctccattgc cctctccca ccaccgcaga gcaggtcggc ctctgctga
8461 ctccctggtc tctgcagcc cctccttcgg ctccgaggag cgtgggttcc cgcctgaacg
8521 gctcctccct gcacctggaa tggagtgcc ccctggagtc tgggtggcga gaggacctca
8581 cctacgccct ccgctgccgg gagtgcgcac ccggaggctc ctgtgcgcc tgcgggggag
8641 acctgacttt tgaccccgcc ccccgggacc tgggtggagcc ctgggtggtg gttcgagggc
8701 tacgtcctga cttcacctat acctttgag tcactgcatt gaacggggtg tctccttag
8761 ccacggggcc cgtccattt gagcctgtca atgtcaccac tgaccgagag ggtgagactt
8821 gggggctggg gcggctggtg gtctggcggg agagatgtca ctgagggcct gaaggggaga
8881 ggcaggggct gtgaagtgg gtaccccgga agtgtgaggg gctaaggctt tgggggcaag
8941 aggcagaaag agggcaatgg ctgggcgcag tggctcacgc ctgtaatccc agcactttca
9001 gaggctgaga caggcggatc acttgagccc tggagttaa gaccagcctg ggtaacatag
9061 gaagatctct ctacaaaaaa taaaaatat agccaggcga ggtggtgcat gcctgtggtc
9121 ccagctactc aagaggctga ggcaggagga ttgcttgagc ccaggagtgc gaggtgcag
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9361 agccaggggg aaattgagac aagtgtagcc agcagaggaa gtgttggaag agataaggga
9421 catggccagg ctgatcacia ggtcaggagt tcaagactag cctggccaac gtggtgaaac
9481 cccatgtcta ctaaaaataa aaaaattagc caggcatggt ggtgggcacc tgtaatccac
9541 ttgggaagca accagaagaa ttgcttgaac ccaggaggcg gaggttgca taagctgaga
9601 ctgcgccact gcactccagc gtgggtgata gagcacgact ccgtctcgaa aaaaaaat
9661 ttttttaagt taaggacag agctaccatg cacaagggtt cctgtgtct cctcctctca
9721 cagtacctcc tgcagtgtct gacatccggg tgacgcggtc ctccccagc agcttgagcc
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9901 ggctgggaca cctgggttgc aggcacctgg caggcatttg aattccagct ctgccatgga
9961 ttccctgggc agccttgggt aagccccttg gcctgtctga gcctcagact cttcatctat
10021 aaaatagtta ctgtaatagt taccagcagc tggacacagt ggctgaggtt ggggtgcgggtg
10081 gctcacgcct gtaataccaa gcactttggg aggtgagggc gggcagaatg cttgagccta

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Fig. 61(d)

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10141 ggagttttgag accagcctgg gcaacatggt gaaacttcat ctctataaaa aacttaaaat
10201 gggccggggcg cggtagctta cgcctgtaat cccagcactt tgggaggccg aggtggggcg
10261 atcacaaggt caggagtatc gagaccatcc tggctaacac ggtgaaaccc catctctact
10321 aaaaatacaa aaaattagcc aggcgcgggtg gcaggcgcct gtagtcccag ctactcggga
10381 ggctgaggca ggagaatggc gtgaaccagc gaggcggagc ttgcagttag ccgagatagc
10441 gccactggcag tccggcctgg gcgaaagaac aagactctgt ctccaaaaaa aaaaaaaa
10501 aaaaaaaacg caaaaaatac ttaaaatgaa aaaaattaga ctgggcacag tggctcatgc
10561 ctgtaatccc ggcacttttg gaggccgagg tgggtagaac acctggggtg aagagttcga
10621 gaccagcctg gccacaagg tgaaatcccc gtctctacta caaatagcaa aatcagctga
10681 gtgtgttggc gggcccctgt aatcccagct actcaggagg ctgagacagg agaactactg
10741 gaacccaagt gattctcgac ttgaggtcga ggctgcagtg agtcgtgttt gcaccattgc
10801 attccagcct gagaaagtga gaccttgtct taaaaaaaag gaatgatatt atgaatacag
10861 cacatggctt gcctgcgtaa gttctcccaa aggcctcacc agttgcaagg caggctagtg
10921 atgggagtgagg agggcgaggagg aaggagcagc gaagagcaac aggaacttgg gttcccgggt
10981 gacggccacc ccaactacct tcccggacag ggcgcggagg gtcccagcag cgtgcggttc
11041 ctgaagacgt cagaaaaccg ggcagagctg cgggggctga agcggggagc cagctacctg
11101 gtgcaggtag gggcgcgctc tgaggccggc tacgggccct tcggccagga acatcacagc
11161 cagacccaac tggatggtga gcctggggaa gggggtgagg gtgggggttg gaaagacccc
11221 caaagtccct gggaagaccc caggtctcca aagtcctatc atcttttttt tttttttttt
11281 tttttgagat ggagctctgc tctgtccctc aggcctggagt gcagtggcac catctccgct
11341 cactgcaacc tccgcctccc ggattcaagc cattctcctg cctcagcctc ccgagttagt
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11641 aaaccaaacc caacagctga gttttgtgaa gtctggcctg ctccactctg tacccccagg
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11761 aaccccagca ctttgggagg ctgaagcagg aggatcactt gaggtcagga gttcgagacc
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12181 tttttttcac attttttttt ttgagacgga gtctcactct gttgccagg gtgagctctg
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12361 ctaacttttt ctttttttta agagacacgg tcttttttat caccaggtt ggagtgcggt
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12601 caatcctccc gcctcggcct cccaaagtgc tgggattaca ggcattgagc gccacaccca
12661 gcattggacc agtggctttc taaaccttgt aattttctgt aatagcttta ctgaaatata
12721 gttcccctgc catacaattt gcctgttcaa agtgtacaat cgatgacttt tgatacattc
12781 acagaattgt gcagtcacca ccacaagtaa ttttgggaca ttttcagcac cctcaaaaga
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12961 cgagcagaat gttttcaagg tttatgtatg ttgtagtata tatccgtggg tttttttggt
13021 tgtggtttgt tttttgtttg ttttggaaac agggctctgc tctgtcacc aggtggaggt
13081 gcatgaggtc aattacagct cactgcagcc tcaacctccc aggtcgaagt gatcctccc
13141 cctcagctcc ccaagcagct gggactgtag ccatgagcca ccattgccc ctaatttttt
13201 ttggtatttt ttgtaaagac agggtttcac catgtttccc aggtggtct cgaactcctg
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13321 tggacctggc ctgttttttg tttttgtttt gaacacacga ttttgctttg tcacccaggc
13381 tggaatgtaa tggctctgat atagtgcatt gcagcctcaa actcctgggc tcaagcgatc
13441 ctccctacctc agcctcctga gtatctggga ccacacgtgc tcaccacct gcttggctaa
13501 ttattattat tttttgatag agacggggtc ttgctatggt tcccaggctg gtcttgaaca

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Fig. 61(e)

13561	cctggcctca	cacaatcctc	ccacctcagt	atctcagagt	gctgggatta	caggcatgag
13621	ccactgctcc	tggccaatat	ttcattttctt	tttatggaga	cgtaataatc	agttgtatgg
13681	aaatagctga	ttttgttttt	tattgtatct	tttggatgaac	atttcaattg	tatcgacttt
13741	ttggataaaa	acctgaaaat	gtttcacctt	tagaacgttt	cattgaatgg	agattttttt
13801	gtggactctg	gtattttatac	tagaaccaaa	tcaaaaccac	tctggcggct	gggcatgcct
13861	aggctggttt	gagactagcc	tgtccaacct	ggtgaaagcc	catctctact	aaaaatacac
13921	aaattagccg	agcatgggtg	tacacacctg	taatcccagc	tactcaggag	gctgaggcag
13981	gagaatcgca	gaaccgcggg	ggcggagatt	gcagtgaagt	gagattgcgc	cactgcactc
14041	cagcctgggc	gacagagtga	gactgcgtct	caaaaaaaca	aacaaaaaat	tactctggca
14101	gtaagaaaag	atctcgaaac	ttcctccctt	gccctgaggt	acttcagagg	agcctgctgg
14161	cccctggggg	agagtttgaa	accactgtt	tgttccctga	ccttgccctg	ttgtgtcctc
14221	tccctccacc	tgtccctgt	actggggacc	tgttctcagg	agatcacagt	tcattgtctc
14281	agccggggg	tggggcctcc	tacaggacca	tcagtttctc	ctgatcagca	gcctttcctt
14341	ccgcagagag	cgagggtgg	cgggagcagc	tggccctgat	tgcgggcacg	gcagtcgtgg
14401	gtgtggtcct	ggtcctggtg	gtcattgtgg	tgcagttct	ctgcctcagg	taagggtctt
14461	gacaccaga	ggccctgga	agcctcagt	tgatggccac	ctgcctgggt	gctacaggac
14521	aagcctttct	ggctgtcccc	agcctctttt	tacttgaaat	cttctccaat	cctgtctcct
14581	tcctttggtg	tgtgtgcctc	ataaagatgt	gtgactcagt	ttaccttttg	ttcctttccc
14641	atcggtaca	ggaagcagag	caatgggaga	gaagcagaat	attcggaaca	acacggacag
14701	tatctcatcg	gacatggtgg	gttgccctaa	tttgatggga	ataggggctt	ggggcggggt
14761	gtgggtgctc	ctatctataa	tccagcact	tgggaggga	gaggtgggca	gatcacttga
14821	ggtcaggagt	tcgagaccag	cctggccaac	atgttgaaac	tccatctcta	taaaaataac
14881	atcagtcagc	caggcatggt	ggtgggcacc	tgtaatccca	gctactcagg	aggctgaggc
14941	agaagaatca	ttttaaccgc	ggaggcggag	attgcagtga	gccaagatcg	cgccactgcg
15001	ctccaggcct	gggtgacaga	gcgagactcc	atctcaggaa	aaaaaaaaaa	aaaaaaaaaa
15061	accacggaga	caggggtttg	gggctaaaag	ctatgagccg	agcctccgag	tccagtggga
15121	gttaattccc	agctgacggg	gccctgcctg	atctctcagg	tactaagggtc	tacatcgacc
15181	ccttcactta	tgaagaccct	aatgaggtg	tgagggaatt	tgcaaaagag	atcgtgtctt
15241	cctacgtcaa	gattgaagag	gtgattggtg	caggtgagag	ccgaaggcct	ccgggaccac
15301	tgggaacgaa	gcgggggtgg	gcaggggcac	actggagcgg	gagagctgat	gacctctgcg
15361	tccttgtttg	aaggtgagtt	tggcgaggtg	tgcggggggc	ggctcaaggc	cccagggaag
15421	aaggagagct	gtgtggcaat	caagaccctg	aaggggtggc	acacggagcg	gcagcggcgt
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15601	gccctggact	ccttctgcg	ggtgagcacc	ctccctggct	tctgcggcca	cccggagttc
15661	ccacttacac	ccagaggcca	cttgggttaa	gaagccagga	cagacagtg	gtcccaggtc
15721	acctcctcca	gccttttctt	cttgggctaa	gccctgggtc	tctgcctttt	ctttttttta
15781	agacagagcc	tcgctctgtc	gccaggtctg	gagtgcagtg	gcgcgatctc	ggctcattgc
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16021	aaagtgctgg	tattacaggt	gtgaggcacc	acgcctggcc	agccctctgc	ctttaatttt
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16141	gttgctattc	cttctttttt	tttttaattt	tgttttaatt	gaattttttt	tttttgagat
16201	ggagtttcac	tcttggtgcc	caggccggag	tgcaatggca	agatcttggc	tcaccgcaac
16261	ctccgcctcc	cagggtcaag	cgattctcct	gccttagcct	ccccagtagc	tgggattata
16321	ggcatgtgcc	accacgcttg	actaattttg	tatttttagt	agagacgggg	gtttctctgt
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16501	gacagagtct	cactctgtcc	cttaggtctg	agtgcagtgg	tgcattcata	gctcactgta
16561	gccttgacct	cctgggctca	agtgatcctc	ccgcctcagc	ctcctgagta	gctggaacta
16621	cactcatgta	ccaccatgct	cagcaaattt	ttaaaatttt	ttgtagagac	aggatctcga
16681	taggttgccc	aggctggtct	gaactcctgg	cctcaagcga	gcctccctcc	tcagcctccc
16741	acagcactgg	gattgcaggc	atgagccact	gtgcctggcc	tgtcattcct	tcttttgaca
16801	aatatttact	gagtgccttc	tacgcaccgg	tcatcctccc	agtccccagg	aataaagcta
16861	tacacacggc	aaactggatt	tctcctcttg	gggagcagag	ggtctaattg	ggcaggggga
16921	ctgaaaaatta	gcaagtaaat	agacaggctt	tttaaaaaag	taaacaatc	atttcaaatg

Fig. 61(f)

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16981 tgaaaaaaag caaacgggggt ccttcatgca gatgtggcta gagaggaaag agaactgctt
17041 aattttatttg gtcacttttac cagatttttac tgactttttt ttttttttta actttattaa
17101 gctttttcttt tttcttgaga tggagtttcc atctgtcacc caggctggag tgcagtgggtg
17161 cgttcttggc tcaccgcaac gtccacctcc tgggttcaag tgattctcct gcctcagcct
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17281 agtagagaca ggggtttcatc atgttgccca ggctgggtctt gaactcctgg gctcaagtga
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17401 taggcatctt tttaaaaaaa tcaaaacatt tttctatgta gcaaaataac attgcattga
17461 acagagttat agcgattccc tagcgctcatt gaataccag ttgattttca cgtttctcta
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17581 ggctttgtac ctgggttatta tatatatatt atttatttat tttagaaaca aggtcttgcc
17641 ctttcgcccc gtttagagtg cagtgggtgca atcatagctc ctgggtagct ggaactacac gtgcacacca
17701 tggctcaggt gatcctcctg cctcagcctc ctgggtagct ctgggtagct ggtgcaccca gttgccagg
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17821 ctggtctcaa actcctggac tcaagcgatc ctccctcctt aacctctcaa agtgcctggga
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18481 cctccttgg cctcccaaag tgctgggatt aaacgcgtga gccaccgtgc ctggctgaag
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19381 tcttgaagc atcaccagca gaacttgctg atggattgga agtggctggg gagggagaaa
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20221 aatttttcaa ctcataatcc gattggggaga gactgaatgc ttaccattga agcaggaacc
20281 attgtaagca atgtgttgtg atactgtagc aagagctgag aaaacttggg aaaagagaaa
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Fig. 61(g)

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20401 tctggaagtg acagatgcag tttaggaagt ggacgggagg ctgggtacgg tgactcaaca
20461 tctgtaatcc cagtgccttg ggagacccag gcggaaggat cgcttcaggc caggagttaa
20521 agaccagcct gggcaacata gtgggaacct atctctacta aaaattaaaa aattatccag
20581 gcataatggc acatgcctat tgttccagct actcaggagg cttgcctgag cccaggagggt
20641 tgaggctgca gtgagctatg atggcaccac tgcactccag cctgggcgac agaacaagac
20701 cctgtctcta aaaaaaaaag atgtggatgg gagggggaac ggtgggtggg ctgtcctcac
20761 caagccccca ccttatctgc tctccagcta aacgacggac agttcacagt catccagctc
20821 gtgggcatgc tgcggggcat cgctcgggc atgcggtacc ttgcccagat gagctacgtc
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21061 ttggaagggt gggaggctga ggggttggca gccctgctcc agggagagga tacaggagca
21121 ggctgtgggt ggggggacag tcagctccag gaagccgact tccagatgtc taggaaaata
21181 acagttggat aacctgggca acatagcaag accccatctc taaaaaaagt taaaagatt
21241 agccaggcgc agtggcatgc acctgtagtc ccagctactt gggagggttg ggcaggagga
21301 ttgcttaagc ccaggagtgt gaggtgcag tgagctatga atgtgccact gtactgcaga
21361 ctgggcgaca gagcaagacc ctgtctcaaa agaacagtgg ccagggtgtg tggctcacgc
21421 ctgtaaatcc agcactttgg gaggtgagg caggaggatc gcctgagggtc aggagttcga
21481 gaccagcctg gccaacatgg gaaaacctg tcgctactaa aaatacaaaa ttagctgagg
21541 gtggtgtgtt acgcctgtaa tccagctac tcaggaggct gaggtaggag aaccagttga
21601 accggggagg cggagtttca gtgagccaag atcgccacc tgcactccaa cctgggcaaa
21661 cagagttgga gtagtaggag cttggggcct gagctagggg gaaaaagcag aggcaggtgg
21721 gggactgggg ggcagtgtgc tgggtctggg gagtccctca gtgagtcccc cagctcacct
21781 tttctccttt ttctgcaggg aggaagatt cccatccgat ggactgcccc ggaggccatt
21841 gccttccgga agttcacttc cgccagtgat gcctggagtt acgggattgt gatgtgggag
21901 gtgatgtcat ttggggagag gccgtactgg gacatgagca atcaggacgt aagtgtcccc
21961 tggctcctac aagctttcct cgagtgttct ctccctggg atttgggggtg aagggtgggt
22021 tcccagagag tcatcactgc tgggttcttg agaccatgga gatgacaaaa aggagaattg
22081 atctttgtat caaagagttg agatacagg ccaggcctag tggctcaagc ctgtaatccc
22141 agcactttgg gaggccaagg tgggcagatc acctagggtt aggagttcaa gaccagcctg
22201 gccaacatgg tgaaaccccc tctctaaaaa aatacaaaaa attagcccag catgatgggc
22261 ggggtgcctgt aatcccagct actcaggagg ctgagacagg ataatcgctt gaacccagga
22321 acagaggttg cagtgcctg agatcacgcc attgctttcc agcctgggca actgagcgag
22381 actctgtctt aataaataaa taaaagagtt gggtagagca tatttgggtc gcagaaggat
22441 gcagagatgg agggcagggt tgagaggtaa catgtctgta tcatagccca agagctgctg
22501 gggccttcag ccacagagag cttcaactcc ggctaggagg attcctggat ctgttatttt
22561 ttggggggct gtggctccta tctaccatc ttccaagtca ccatttccct ggctgtttag
22621 catctttgct tttcctggac agcctcacc cggctgcccc agagcttctt cccctcttcc caggtgatca
22681 atgccattga acaggactac cggctgcccc cgccccaga ctgtccacc tccctccacc
22741 agctcatgct ggactggttg gagaaagacc ggaatgccc gccccgctt cccagggtg
22801 tcagcgccct ggacaagatg atccggaacc ccgccagcct caaaatcggt gcccgggaga
22861 atggcggggt aggactgcag agaatgggct ctcttcccgt ctctctgccc ccactccttg
22921 cccagaagtg tccgttcatt ggtgttgggt gggagggcct ctgtccgctc ctgcaaggct
22981 gggttccacc tccctccccg gacctgggct tggtagctag cattcctccc catccttggc
23041 ccctagggcc tcacaccctc tccctggacca ggcgcagcct cactactcag cttttggctc
23101 tgtgggagag tggcttcggg ccatcaaaat gggaagatac gaagaaagtt tcgcagccgc
23161 tggctttggc tccctcgagc tggtagacca gatctctgct gagtaagcag tggcaggagc
23221 tggagtgggg ctgggagagc ggggcagctg gagtcaggcc cacggggtct ccaggggctt
23281 ttgggggtcag cttcgggtgc caatgtgtc ttcttgact gcgctcatgc catgcttaga
23341 agggccccag aggagcagtc acagcccatc ggagctgagg acccaaggac tctttggggc
23401 cagcctgccc gcctcacctc ctccctgcat cagagccctg ggccatcgcg cttccgctc
23461 tcacttctag ctatctttgt gcactctatc gcattccagg cccggctctc acggtaacaa
23521 tgtgtcaact cgggttctct ttttccaacc ataaaaggag aagattgggc taggttttgg
23581 agatcctctt cagcttttat gtgaaatggg tttatgattc cttgcctccc aaaggctgcg
23641 tatccccact tggcctttgt ctgctactcc ccttttctgc cttcccgctt ctctcccaag
23701 atctcctctc accccaggtt gaataacaga aatagaagga atagaaatct gaaggccggg
23761 catggtggct catgcctgta atgccagcac tttgggaggc cgagggtggg agatcacttg

```

Fig. 61(h)

```

23821 aggttaggag ttcgagacca ttgtggacaa cttggtgaaa ccttatgtct actaaaaata
23881 caaaaattag ctgggcatgg tgggtgcgtgc ctgtaatacc agctactgag gaggctgagg
23941 caggagaatc gcttgaaccc gggaggtgga ggttgcagtg agccgagatc gcaccactgc
24001 actccagcct ggatgacaga gtgaaattcc atctcaaaaa aaaaaaaaaa aaaaaaaaaaag
24061 aaatgtgaag gccaggtggt ggctcacgcc tghtaatctca gcactttggg aggctcaggt
24121 ggaccgattg cttgagccca ggagtttgag agcagcctgg ccaaaatagc aaaaccccat
24181 ctctacaaaa caaaaacaaa aaaattagct gggcatggtg gtgcgtgcct gtggtccag
24241 ctactcagga ggctagagcc agaggtgtct aggccagtct gcccctgccc cagggggcct
24301 gggcacatcc ctccctaatt cttcccagcc tctctctgac ccagggggcc tctctccct
24361 tttttccctt tatctcagcc tccagccatc agcaacctcc tcttccctcc caccagctc
24421 ttccctctccc acttcggcct tttctttctc acactccatt tccctctacg gcaatctgtg
24481 cagcctcttc ccccagcttc attttgcggg cttttctctc ttttctttcc ttccctggca
24541 cccaagcaca aggccctgcc ctagctctta aaaaaactgc ccgggaactg ttgacatctg ttctccctcc
24601 ggatggctgc ccagctctta gcttacaatc ctgaggtag gaccgtctca ggagccaaga
24661 cccgctggct tttctgattg gcttacaatc ctgaggtag gaccgtctca ggagccaaga
24721 gaggagagcg gccacaggga acctagggtc tcaccaagct ctcccttccct tctgcaggga
24781 cctgctccga atcggagtca ctctggcggg acaccagaag aaaatcttgg ccagtgtcca
24841 gcacatgaag tcccaggcca agccgggaac cccgggtggg acaggaggac cggccccgca
24901 gtactgacct gcaggaactc cccaccccag ggacaccgcc tccccatttt ccggggcaga
24961 gtggggactc acagaggccc ccagccctgt gcccgcgtgg attgcacttt gagcccggtg
25021 ggtgaggagt tggcaatttg gagagacagg atttgggggt tctgccataa taggagggga
25081 aaatcacccc ccagccacct cggggaaactc cagaccaagg gtgagggcgc ctttccctca
25141 ggactgggtg tgaccagagg aaaaggaagt gcccaacatc tcccagcctc cccaggtgcc
25201 cccctcacct tgatgggtgc gttcccgcag accaaagaga gtgtgactcc cttgccagct
25261 ccagagtggg ggggctgtcc cagggggcaa gaaggggtgt cagggcccag tgacaaaatc
25321 attgggggtt gtagtcccaa ctgtctgctg tcaccaccaa actcaatcat tttttccct
25381 tgtaaatgcc cctccccag ctgctgcctt catattgaag gtttttgagt tttgtttttg
25441 gtcttaattt ttctccccgt tccctttttg tttcttcgtt ttgtttttct accgtccttg
25501 tcataacttt gtgttgagg gaacctgttt cactatggcc tcctttgccc aagttgaaac
25561 aggggcccac catcatgtct gtttccagaa cagtgccttg gtcacccac atccccggac
25621 cccgcctggg accccaagc tgtgtcctat gaaggggtgt ggggtgaggt agtgaaaagg
25681 gcggtagtgt gtggtggaac ccagaaacgg acgccggtgc ttggaggggt tcttaattaa
25741 tatttaaaaa agtaactttt tgtataaata aaagaaaatg ggacgtgtcc cagctccagg
25801 ggtgatgggg gtgatggact agatttctaa ggagagtggg gctgggtagg gagggttttg
25861 tggctgaccg agaggtgtca gaggtctgga ggctgcaggg ctgtaggggc tggaaacttg
25921 ttatcagccc cagggtatgt ttgaggtggg ggggtggggg ccgagcgaga tgaatcattc
25981 gcagctgctt ctaacgtctc

```

FIGURE 62. EphB4, mRNA.

```

1  ctccggcccg  cggcgcgagc  agagccactc  cagggagggg  gggagaccgc  gageggcccg
61  ctcagccccc  gccaccgagg  gcgggacccc  gaggcccccg  agggacccca  actccagcca
121  cgtcttctgt  cgcgcgccgc  cggcgcgggc  actgccagca  cgctccgggc  ccgccgcccg
181  cgcgcgcggc  acagacgcgg  ggccacactt  ggcgcgcggc  cccgggtgcc  cgcacgctcg
241  catgggcccg  cgctgagggc  cccgacgagg  agtcccgcgc  ggagtatcgg  cgtccacccg
301  cccagggaga  gtcagacctg  ggggggcgag  ggcccccaa  actcagttcg  gatcctacce
361  gagtgagggc  gcgccatgga  gctccgggtg  ctgctctgct  gggcttcggt  ggccgcagct
421  ttggaagaga  ccctgctgaa  cacaaaattg  gaaactgctg  atctgaagtg  ggtgacattc
481  cctcaggttg  acgggcagtg  ggaggaactg  agcggccttg  atgaggaaca  gcacagcgtg
541  cgcacctacg  aagtgtgtga  cgtgcagcgt  gcccgcgggc  agggccactg  gcttcgcaca
601  ggttgggtcc  cagggcgggg  cgcgcgtcc  gtgtacgcca  cgctgcgctt  caccatgctc
661  gagtgcctgt  ccctgcctcg  ggctgggcgc  tctgcaagg  agaccttcac  cgtcttctac
721  atcaaggttg  acacgggtgg  ggcacggcc  ctacgcgcag  cctggatgga  gaacctctac
781  atcaaggttg  acacgggtgg  cgcggagcat  ctaccccgga  agcgcctgg  ggccgaggcc
841  accgggaagg  tgaatgtcaa  gacgctgcgt  ctgggaccgc  tcagcaaggc  tggcttctac
901  ctggccttcc  aggaccaggg  tgctgcctg  gccctgctat  ccctgcacct  cttctacaaa
961  aagtgcgccc  agctgactgt  gaacctgact  cgattcccgg  agactgtgcc  tcgggagctg
1021  gttgtgcccg  tggccggtag  ctgcgtggtg  gatgccgtcc  ccgccctgg  cccagcccc
1081  agcctctact  gccgtgagga  tggccagtg  gccgaacagc  cggtcacggg  ctgcagctgt
1141  gctccggggg  tcgaggcagc  tgaggggaac  accaagtgcc  gagcctgtgc  ccagggcacc
1201  ttcaagcccc  tgtcaggaga  agggtcctgc  cagccatgcc  cagccaatag  ccactctaac
1261  accattggat  cagcgcgtct  ccagtgcgc  gtcgggtact  tccgggcacg  cacagacccc
1321  cggggtgcac  cctgcaccac  ccctccttcg  gctccgcgga  gcgtgggttc  ccgctgaac
1381  ggctcctccc  tgcacctgga  atggagtgcc  ccctggagt  ctggtggccg  agaggacctc
1441  acctacgccc  tccgctgccg  ggagtgccga  cccggaggct  cctgtgcgcc  ctgcggggga
1501  gacctgactt  ttgaccccg  ccccgggac  ctggtggagc  cctgggtgg  ggttcgaggg
1561  ctacgtcctg  acttcacct  tacctttgag  gtcactgcat  tgaacgggg  atcctcctta
1621  gccacggggc  ccgtcccatt  tgagcctgtc  aatgtcacca  ctgaccgaga  ggtacctcct
1681  gcagtgtctg  acatccgggt  gacgcgggtc  tcaccagca  gcttgagcct  ggcctgggct
1741  gttccccggg  caccagtggt  ggctgtgctg  gactacgagg  tcaaatacca  tgagaagggc
1801  gccgagggtc  ccagcagcgt  gcggttcctg  aagacgtcag  aaaaccgggc  agagctgcgg
1861  gggctgaagc  ggggagccag  ctacctggtg  caggtacggg  cgcgctctga  ggccggctac
1921  gggcccttcg  gccaggaaca  tcacagccag  acccaactgg  atgagagcga  gggctggcgg
1981  gagcagctgg  ccctgattgc  gggcacggca  gtcgtgggtg  tggctcctgg  cctggtggtc
2041  atttggtcgt  cagttctctg  cctcaggaag  cagagcaatg  ggagagaagc  agaatactcg
2101  gacaaacacg  gacagtatct  catcggacat  ggtactaagg  tctacatcga  ccccttactc
2161  tatgaagacc  ctaatgaggc  tgtgagggaa  tttgcaaaag  agatcgatgt  cctctacgtc
2221  aagattgaag  aggtgattgg  tgcaggtgag  tttggcgagg  tgtgccgggg  gcggctcaag
2281  gccccaggga  agaaggagag  ctgtgtggca  atcaagaccc  tgaagggtgg  ctacacggag
2341  cggcagcggc  gtgagtttct  gagcgaggcc  tccatcatgg  gccagttcga  gcaccccaat
2401  atcatccgcc  tggagggcgt  ggtcaccaac  agcatgcccg  tcatgattct  cacagagttc
2461  atggagaacg  gcgccctgga  ctcttctctg  cggctaaacg  acggacagtt  cacagtcate
2521  cagctcgtgg  gcatgctgcg  gggcatcgcc  tcgggcatgc  ggtaccttgc  cgagatgagc
2581  tacgtccacc  gagacctggc  tgctcgcaac  atcctagtca  acagcaacct  cgtctgcaaa
2641  gtgtctgact  ttggcctttc  ccgattcctg  gaggagaact  ctccgatcc  cactacacg
2701  agctccctgg  gaggaagat  tcccatcga  tggactgcc  cggaggccat  tgccttcgg
2761  aagttcactt  ccgccagtga  tgcctggagt  tacgggattg  tgatgtggga  ggtgatgtca
2821  tttggggaga  ggccgtactg  ggacatgagc  aatcaggacg  tgatcaatgc  cattgaacag
2881  gactaccggc  tgccccgcgc  cccagactgt  cccacctccc  tccaccagct  catgctggac
2941  tgttggcaga  aagaccggaa  tgcccgccc  cgcttcccc  aggtggtcag  cgcctggac
3001  aagatgattc  ggaacccgc  cagcctcaaa  actgtggccc  gggagaatgg  ggggacctca
3061  caccctctcc  tggaccagcg  gcagcctcac  tactcagctt  ttggctctgt  gggcgagtg
3121  cttcgggcca  tcaaaatggg  aagatacgaa  gaaagtctcg  cagccgctgg  ctttggctcc
3181  ttcgagctgg  tcagccagat  ctctgctgag  gacctgctcc  gaatcggagt  cactctggcg

```

Fig. 62(b)

```

3241 ggacaccaga agaaaatctt ggccagtgtc cagcacatga agtcccaggc caagccggga
3301 accccgggtg ggacaggagg accggccccc cagtactgac ctgcagggaac tccccacccc
3361 agggacaccg cctccccatt ttccggggca gagtggggac tcacagaggc cccagccct
3421 gtgccccgt ggattgcact ttgagcccggt ggggtgagga gttggcaatt tggagagaca
3481 ggatttgggg gttctgccat aataggagggt gaaaatcacc cccagccac ctcggggaac
3541 tccagaccaa gggtgagggc gcctttccct caggactggg tgtgaccaga ggaaaaggaa
3601 gtgcccaca tctcccagcc tcccagggtg ccccccctac cttgatgggt gcgttccgc
3661 agaccaaaga gagtgtgact cccttgccag ctccagagtg ggggggctgt cccagggggc
3721 aagaaggggt gtcagggccc agtgacaaaa tcattgggggt ttgtagtccc aacttgctgc
3781 tgtcaccacc aaactcaatc atttttttcc cttgtaaatg cccctcccc agctgctgcc
3841 ttcataattga aggtttttga gttttgtttt tgggtctaat ttttctcccc gttccctttt
3901 tgtttcttcg ttttgttttt ctacogtcct tgtcataact ttgtgttggg gggaacctgt
3961 ttcactatgg cctcctttgc ccaagttgaa acagggggcc atcatcatgt ctgtttccag
4021 aacagtgcct tggtcatccc acatccccgg acccgcctg ggacccccaa gctgtgtcct
4081 atgaaggggt gtggggtgag gtagtgaaaa gggcggtagt tgggtggtgga acccagaaac
4141 ggacgccggt gcttgagggt gttcttaaat tatatttaa aaagtaactt tttgtataaa
4201 taaaagaaaa tgggacgtgt cccagctcca ggggt

```

FIGURE 63. EphrinB2 Gene

```

1  gcgcctcgga gctgcctgcg gggcacgcgc gtcttccccg ccagtctgcc ccggaggatt
61  ggggggccca gectgcgtcc cgtcagtcgc ttcttggccc ggagtgcgcg gagctgggag
121  tggcttcgac atggctgtga gaagggactc cgtgtggaag taccgtctgg ggttctgat
181  ggttttatgc agaactcgga tttecaaatc gatagtttta gaacctatct attggaattc
241  ctggaaactcc aagtaagtgg cgtccgcgat cccctatgt ccccgccccg ggttccgcgc
301  cgccgtccgg gcgggaggag gggtcagtcg gcggggcctc ggagcctgtt tctggaacct
361  cggttccccg tccccacccc ccaacccccg cccatttca ctaggaggag actcctcgct
421  cggttttcca acccgagccc cgttggaacg gacggtctct ccgcctttcc tccccgaac
481  gctcccaggc gctaaaagct actatcggtc cgggtgtcaa gtccgggaag gtgtccgatg
541  gcgataactg acctctcctt gttttcgagg acgaaggaca tgccacaat ctaggctggc
601  cggcacgcgc ggactggtgg gctctggaga gaggcggaga tgctgcatc gcggggagcg
661  cgggcggcgt ggctcggggc ccgcgggcgg gcgaccgggg tggcaggacg ctggcagcga
721  agcgcgttct ggagagggga gcctggagtc gctacgctgc ccgcagagcc ctggcagcgg
781  ggcgccttgg caccgcgcgc ccagcccgag ggtgcgcggg gagctcgctt gcttcgcagg
841  agaactcggg cgtcgagccc ttctctcgc gccggggaga cgggccttag gcttctcctt
901  gagggcgcgc cgcacctcgc cctcccgctt cgttcataag ccggtagccc cggagtatgc
961  ggtctcgatg gccgacctga ttgtaatgca ctctctataa aagcttaggg ccctgcccag
1021  tcgacactgc tctgaagcc ttctccctcg ggacctggt aggaatggga tcttaggat
1081  cagatttgct cttaccggac tctacagccg ggagcagacc aggccttggt gagagtaact
1141  ttcagtttgg gccaccagag tgcattcaga atttagaaaa tccatccat cctaatactt
1201  gtgtggtcat aactcgtagt catctgggta ttcagtactg tgtatccctt tatttcgaat
1261  cacagccaaa acatatttta cagaatcttg gaattgtagt ctgggaaac ttggagaaga
1321  agtatgcaga cattagctgg tttctggaga aaacgtttga gatcagaagc aaaatcaatg
1381  gcctaattga agttgagcaa gttgggcctg gttttaggag aaaagaaatg ggggattgat
1441  ttagaaatca cgtcttaaag gagtgtgttc attctcttaa aagtgtcaaa tttcaaattc
1501  actaacatgt taaccaagaa tcccttcattg aaagggcgca aaacgtcggg tacaatcgg
1561  tttaaacaaa tgtttgatg atgctagaag gcactttcaa caccgctcat caggagaagt
1621  tacttagctc tgctccttc catgtagtct gctcttgcat ggattatatt ttaatgtaa
1681  attgttgat ttgctgatga agtactggcg gcggcatctt tgcatcgatg ccggtcggg
1741  aggcgcagg tggtgccgga aggagccggg ctaggacctc gcgcagcagc gggcccgga
1801  gtccgggaga ggcgggcggg cgggcgaggc ggtcgcgggg agccgcggc gccgctgcc
1861  gcccggtgcc tccagaggtc actcttccat gcggaatcgc gcagcgcagc gcctcgcccc
1921  tccccaggc cgcctgctcc agccactctg cactttcact gaccggttct ctttgaggct
1981  gttttttttt tcttatgag gatttaatat ttctgtttaa atctagtta agcaattcc
2041  gttagcctct tcagcgttta gttcgggtgt tgtatcttta tctttgcgt atattaacta
2101  ttagtttggt tgtatccggt aggagaatta gaaataccta gttgggagaa aaagaaaagt
2161  agaacaatag ttatttcaac ctaaggttta gacgttaata acttcttttt gtaatgtgtc
2221  gagatggggg gtccctgggg gaggtgacag gtactacca cccccccc ccattctgat
2281  gatgaagatg agtctgtctt tccagctatg tccagacctg caggggcctt gcgtttctgg
2341  aagcctgccg tttgcgcggt tgaggttgct gctgctgtct tgtctccac agcagcattt
2401  cttttaaaaa tctcctgata acggcctgcc tggatgactg gataatgtgt gcttggaaaa
2461  ggtctccctt gcagctgaat gctagctcca gagatcagaa agatttcttc ctgtaggagc
2521  cataggaaa agtctctctt aagtttttga gaatgcatac aacccctga tgacaggggg
2581  tcgctttcct tggggaagtt ttatatattt tccagagga aagtttgaat cggtaaatat
2641  gatgtggcag gaaggtaatc aaatgcattg aagtttcaca tcagttccta tgaactgtgg
2701  aacaattcat ttgtaatgaa gccgccatca gtaattagat ttgtttcatt cagaggtcag
2761  ctttttttag aggtggtcga cacagggagc atgcagcagc tgtttgata cagggtccag
2821  aaaaaccttt gtaaatcag cgtctccta actactttaa tcacattgtc ggctctccc
2881  tccctgactg tatgtaataa tggaagatg tccctgcgtg tgaaacagta gctgccctgt
2941  taggttattc acattgcttt gatagttctt ggtagagttg ggtccgttgt agccattttg
3001  gttgttttaa gttttggtt tttttttgtt ttttttttaa ttcagcagag aacagtaatg
3061  cctagcttcc gtttttaact taacacttca gtagaacatt ttcttccaag agggagattt
3121  tggcctaagt aaagtagtgg gctctttttt aaaaaaaaaa taattttact ttaatgtgag
3181  caaatctgta ttggtatggt gttctgcaat gcattacact gactttgaaa atttcagta
3241  ctaatgcctt atgtctgggg ttaccattcc ctgtgcatac catactagtt agttaacata

```

Fig. 63(b)

```

3301 gcatttttgc tttcccatgt aattttttcc ctatataata ctggattcct gataactaatt
3361 gacttgatac aaaagaatgg ctggatgata tccagataac gtataataca tgggcttcac
3421 cacaatcagg ctctgaataa atacagacct gtcagagatt gataaaataa actacaatgg
3481 atagtgtgtg ttaaacagtc cattcaataa catatataag ccagcctgcc ttccatttgtg
3541 tctgaaatcc ttatttttgg aggtaaacaa atgcacattc agcactgatt gaatagcccc
3601 ttgaactatg ctccacagtt tgcgtttggg ttaatcttgt cggttttaat atagagagaa
3661 aaaagctcaa agcaccaggg gtggaattgt tagtgctttc acatccacat tctccacatt
3721 ttgtcaggat gataaactgt aggtaatgga ctgtcgttgt tctgcaggac aactgagcca
3781 ggcagagcac aaagactaag ctaaagcgat acctcacaac atgcttggtg gccttctttt
3841 cagatgagaa tttatttgag aatcatgtgt ctagggactg cacatcttaa cctcaacagt
3901 tacagcttca agccccagaa acaggagctg gaggttaaga tgatttgcta agcacctggt
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4141 gagtgcagctg aagaacaatt ggtggattta tattaataacc tcttgctgtg aaacttactg
4201 aggtgcatcc ttcggttggt ggatcagtga gataattgcc ttcagatgga cattgcaact
4261 ggagcaacta aatccttgct gtctttcctt cctctgaaat cttccaggta gctcccgaga
4321 gcttcagtat gacaccaaac ttcgggcgac gtttttagagt gcgttcacct aatgggaaac
4381 tattcgagat cccagcgtga ctgcagtaat gcgtcatagg aatgggagtg gcaggggaaa
4441 aggaatatac gattgtagac cctaataaaa aaatttttag gaaagatatt tctttaactg
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6601 ttgttgttgt tgtttttttt ttttaaagag cagcataggg ccttctaga ctcttgattt
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Fig. 63(c)

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6781 ttgttgactg tttttctcgt ttctatggga attactgtag ccattactat gtagctttca
6841 tagactcaaa acatttttaa agtattgcat ataggctggc catatccagt gcctgttact
6901 ttaccttctt tttctaactt aatgcagcag tctgtattaa cagatccatt tcatttgtct
6961 agcttcatca gagagaggct acccctgat ttacaggctg ctcacatcca agcaccttgc
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7081 gggaacagaa catgataaat gtccagcaag cttgctgcct ccttcagctt ttcaaacgca
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10021 gttattaata aaagtcagtt gaatatgtac tgtgtgctg gccgtgggtc aatttgctt
10081 tgcatacaag gaaaaatta aaatactctg ttaataaaga ctatagcata atactttcac

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Fig. 63(d)

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10261 ctcctctgct ttcttgcttt tgggtgcttTc taataacact tttAACctg gactttctca
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Fig. 63(e)

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13681 agtttaatta ctttttttca aaggtatgcg tgatgaagag gcacaaatac acctcacctt
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Fig. 63(f)

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17221 aagttcaata ggtaattcaa gagtaaaaac agattccaat atcagatctt ttcaccatag
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Fig. 63(h)

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Fig. 63(i)

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Fig. 63(j)

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30961 gtatcttggc aaggatattt taatgattga gactgtcaga atcttcagag caggcactgg
31021 attatgtgct ggaaataatt cactcaaaca cctgcttctc catgggttcag aatattttca
31081 ttagatatta tcaactatccc ttccctggga agtttcattt ttaaaaatct gatgcttaag
31141 tacagctaata atagacaata gggaattatg ttttatcttt agaactctta cattattctt
31201 ttcttttaaaa atgtgagctg agtcattgct attgcagtgg tcatctggcc gcctattttt
31261 aaaacacaat tcctctatct tagtagattt tggcccatat taagcatatc aagaatgact
31321 tttttttttt caagacatgg ggttttattg ggggcttata tacaaggaaa gagagagtcc
31381 agtggcagtg ggctggacaa gatattcaca tggccctgtg gcagtgaagt gggcaggaaa
31441 actgcaactg cttgcaaaca gcatgtagtt catctatagc attttcactt aacaccaccc
31501 agctaagac ttccacctgg caaccttcac ttaatccaga acttaggacc tcgagtcctt
31561 gtacggccca tgttccacag gatgggcca gggctcagct gttcctcata gacaaggaaat
31621 gactctccac attggccact cccggattcc ctagctcagg acacatatcc aggtgtgtct
31681 aaggctggct cttctatgtg aagttactta ttcttttacc attgactctc atgttcccac
31741 tatattaagt ttttctgaat tactgtggca ataagaaacg gtcccttaaa ttatactaga
31801 agaaaagctt ttttttgtt ttgtttttta ttttgaaatt atgttaaatt ttttttctta
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32521 agttctgtat cctgggtatcc tttctcttcc caagtagaag caattaagta atatatgtca
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32701 gaattttga aattaaagaa ataaaactgt accattttct ttaagagcat ccaattgtac
32761 ttgataacat cttcagtcac atttcaatg tggcaaagag gaggggagtt ctaagctgtg
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32941 ctgctttaag ttttcaaaac acaaccatag caatgtggta ttaattcaag tgattcttcc
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33061 ttatacagtg ttttagctgt ggctccctgc atgcaaaata agagttaatc aaatgtcagt
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33241 tttgggaggg cgaggcgggc ggatcacgag gtcaggagat cgagaccaa ctggctaaca
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33361 tgtagtccca gctactcggg aggtcagggc aggagaatgg cgtgaacctg ggaggcagag
33421 cttgtggtga gccaatgca caccactgca ctccagcctg ggtgacagag cgagactccg
33481 tctcaaaaaa aaaaaaaagg aaaataaatt ctctgtgatt tttctttctt caagtgagge
33541 catttagggg aaagtatacc ataaaacttg ctctaagata aggcaaattt ggtattatag
33601 gatgaagtgc tatgtgattt gaagtaatgc tgaatttttt aaatatatta aactaaacaa
33661 gaataatgag gccctcgaa agtcatgatt atatttctca tttttctcat tttaaagcca
33721 cagtgaaaaa cacataaaag gaagaagtta gaaaaaaaaa tgaatgaaat tctttttttc
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33841 aacagtcatt ttttttggc attcagtga cactatcatt tccatgttta gaactttctt
33901 tctaagttag catcttaaaa gataactgtg aaactcaagg cattcaacta cattaatttg
33961 agtttcagaa attgaattct tgtttctaga gtacatagtt tgaattgatg tcagggtgtt
34021 aaatagataa atcttagctt cctaggttgt atattcacac taattatttt tttatcagcc

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Fig. 63(k)

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34081 ttcttatttt tcaacttacc ttattctttt tgtttttttg acactcagat ttgatagccc
34141 tgtggtagaa gaaaacagta atacagtttg gtttgttgtt gtgttttgtt ttattttaaa
34201 gtcacggctt tgctttccat gttgttactg gattatgctt tttttaattc ttcagtttgc
34261 caagataaca gtcttccgat cttcagaagt ctgtatcaag ctttaaggaaa ctgatgtgta
34321 ggaagactcg cctaagaagt ccaaattagc aaggctagca tgtgaggaca tgctggaaaa
34381 gaatagttec catagatatt gacagagagt gttcataaaa tgctacttgt tttgtggtta
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34501 ctctgtgggt ttcatgaccc tggatgctta tcatgtctct ctgttggact tcttcaacgg
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34621 acaaatacgc tacattttta aataatttga aataacctca atagtattta tatttcttgg
34681 tgcttcattc tttccataag aactgtgata ccattattct gtaggatttt tttgtgcttc
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35461 tgtgatttca tttatgtagc aatactatga ttgtggctgc attagatcac gctgatagaa
35521 agatacaaaag aaaaactaag tataatgaac taacaattta ttttcaactc ttctctaagt
35581 taaaaattcc cagtacattc aaatgaacaa tgaaaataat tgcagaattg tctcctgaaa
35641 tggaaataga ttttttttcc caagcattag caatttcttg ttatttttca aaatcagcca
35701 ctaagccttt cagagcttct tggtgactat tgcaggagaa atcagaatat taactctgtg
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36001 ctggagtttc agtttagtacc agtgtactaa ctgggttaaa acagttcatg gcaccttaga
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36181 tatcttccag taccctttgc aagtccaggg ttgacttaaa aggaaaagaa gcaaaatgct
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36601 ggtaaaccta gggagctccg cacaaaagca ttgatattca gaaaaggcac tgacctacaa
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36721 aagtcacagc cagtttctcc ctctgcagac gcagttctca attctattta caagtaactg
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37141 cttttcactt ctttctatat gcagacatat cctaattttt tagaaaaatc aaataggaaa
37201 attctcaaca attaatgaa gattatagct ctgctctgaa atgggtccaga aataggatct
37261 gctcatagaa actcatagtt tgaagcctct gggaggaaag gatactttaa aatttagtca
37321 catatttgga ggagggaaaa gggaaagagc agaatgaaga actgaaaaaa atcacacacc
37381 ggggcctgtc gtgaggtggg ggactggggg agggatagca ttaggagata tacctaattg
37441 aaatgacgag ttaacaggcg cagcccacca acatggcaca cgtatacata tgaacaaac

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Fig. 63(l)

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37501 ctgcacgcttg tgcacatgta ccctagaact taaagtataa taaaaaaaaa ttttaatagc
37561 cccattaaat aattaaaaag atttttttta gattcacaga agtgtaaaaa attttttaggt
37621 tttttttttt ttaagctgtc tgcgtgaatag tttcttaatg gtotacaatg tttgtatcta
37681 caaacagata ctgtctgtct cttactaccc ttccaagaca agtattatta tggcaattat
37741 tgcccagttt cccgggaaaa atttatccac agttacagaa gaatgagatg caattgtgag
37801 actgtaaagt ttaagcaagc actcagagaa gcacagtgat atgtatgcac agaagaggca
37861 gtctttgttt tgaggaaaac agtgaaagta aagttaattc aagaccacaa agacaagtaa
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40801 tctgtatttg ttaccatgct aatgaaggtt ttatagagta gctgttgagc agacatcagc
40861 agttttgtat taggattgtt gtgtgcttgc ttggctgttg tgcaaattha tctgtctgag

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Fig. 63(m)

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40921 caatattcca tccctttcca agagtcaagg agggaagttg ttattttctaa ctttcaatga
40981 caagatgtgt caaattcttg tgacaaactg ataaatggat aatataatga tgccaggcag
41041 ttttttagtg cttaacattt gggctggcag tctgttcggt gtgagagttt ctgctgcctt
41101 ccaaataatat tttaagtgt aatcaaataa tacagacgag ttacgagctg aacattttcc
41161 caggccccct cactccttcc gcgttcccga gctgttctgt tctgccagga ggcagggtc
41221 ttcttttagaa ggcaggccct ttgaaggttt gcatgaaact ccctttctca aaggaggcgg
41281 aagagcaata ccacataaac gctcacgct gacctggaga attggccact tcccttttcc
41341 ttccctgccc ctgccccagg ctggctgaca cgggttagaa gatgaagcaa gatcaagggc
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41461 tgggagggtg gggaggtccc tcctagagat acctctcatt tccttttgcg ttgagctctt
41521 agacgaggta ttggcgaggc aaagtccagc ttctagttag taataagcct ggcttatttt
41581 tcacattttt aagggtcata aaagcagtc gtctgcactg ggacagcagt aactatctct
41641 gaccttttct gtctcgcgt ctgcaggttc tagcacagac ggcaacagcg ccggacattc
41701 ggggaacaac atcctcggtt ccgaagtggc cttatttgca gggattgctt caggatgcat
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41821 caggaagcac tcgccgcagc acacgaccac gctgtcgctc agcacactgg ccacacccaa
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42361 gaagccaagg gaagacagtg gtttgtggac gagagggctg tgagcatcct ggcagggtgc
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42961 ctgcgtgtta tcaaatagcg atgtgcagga agaaaagccc ctcttcattc cggggaacaa
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43681 ggtcccaatg ctgagcgtt aaaaaaaca attggacagc tacttctggg aaaaacaaca
43741 tcattccaaa agaacaata atgagagcaa atgcaaaaat aaccaagtcc tccgaaggca
43801 tctcacggaa ccgtagacta ggaagtacga gcccacaga gcagggaagc gatgtgactg
43861 catcatatat ttaacaatga caagatgttc cggcggttat ttctgcgttg ggttttccct
43921 tgccttatgg gctgaagtgt tctctaga

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FIGURE 64. EphrinB2, mRNA

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1  gcgcggagct  gggagtggct  tcgccatggc  tgtgagaagg  gactccgtgt  ggaagtactg
61  ctgggggtgtt  ttgatggttt  tatgcagaac  tgcgatttcc  aaatcgatag  ttttagagcc
121  tatctattgg  aattcctcga  actccaaatt  tctacctgga  caaggactgg  tactataccc
181  acagatagga  gacaaattgg  atattatttt  ccccaaagtg  gactctaaaa  ctgttggcca
241  gtatgaatat  tataaagttt  atatggttga  taaagaccaa  gcagacagat  gcactattaa
301  gaaggaaaat  acccctctcc  tcaactgtgc  caaaccagac  caagatatca  aattcaccat
361  caagtttcaa  gaattcagcc  ctaacctctg  gggctctaga  tttcagaaga  acaaagatta
421  ttacattata  tctacatcaa  atgggtcttt  ggagggcctg  gataaccagg  agggaggggt
481  gtgccagaca  agagccatga  agatcctcat  gaaagtgtga  caagatgcaa  gttctgctgg
541  atcaaccagg  aataaagatc  caacaagacg  tccagaacta  gaagctggtg  caaatggaag
601  aagttcgaca  acaagtccct  ttgtaaaacc  aaatccaggt  tctagcacag  acggcaacag
661  cgccggacat  tcggggaaca  acatcctcgg  ttccgaagtg  gccttatttg  cagggattgc
721  ttcaggatgc  atcatcttca  tcgtcatcat  catcacgctg  gtggtcctct  tgcgtgaagta
781  ccggaggaga  cacaggaagc  actcgccgca  gcacacgacc  acgctgtcgc  tcagcacact
841  ggccacaccc  aagcgcagcg  gcaacaacaa  cggctcagag  cccagtgaca  ttatcatccc
901  gctaaggact  gcggacagcg  tcttctgccc  tcaactacgag  aaggtcagcg  gggactacgg
961  gcaccgggtg  tacatcgtcc  aggagatgac  cccgcagagc  ccggcgaaca  tttactacaa
1021  ggtctgagag  ggaccctggt  ggtacctgtg  ctttccaga  ggacacctaa  tgcctccgatg
1081  cctcccttga  gggtttgaga  gcccgcgtgc  tggagaattg  actgaagcac  agtcaggggg
1141  gagagggaca  ctctcctcgc  gaagagcccg  tcgcgctgga  cagcttacct  agtctttag
1201  cattcggcct  tggatgaacac  acacgctccc  tggagctgg  aagactgtgc  agaagacgcc
1261  cattcggaact  gctgtgccgc  gtcccacgtc  tctcctcga  agccatgtgc  tgcggtcact
1321  caggcctctg  cagaagccaa  ggggaagacag  tggtttgtgg  acgagagggc  tgtgagcatc
1381  ctggcaggtg  ccccaggatg  ccacgcctgg  aagggccggc  ttctgctgg  ggtgcatttc
1441  ccccgagtg  cataccggac  ttgtcacacg  gacctcgggc  tagttaaggt  gtgcaaagat
1501  ctctagagtt  tagtccttac  tgtctcactc  gttctgttac  ccagggtctc  gcagcacctc
1561  acctgagacc  tccactccac  atctgcatca  ctcatggaac  actcatgtct  ggagtcctct
1621  cctccagccg  ctggcaacaa  cagcttcagt  ccatgggtaa  tccgttcata  gaaatttgtgt
1681  ttgctaacaa  ggtgcccttt  agccagatgc  taggctgtct  gcgaagaagg  ctaggagtcc
1741  atagaaggga  gtggggctgg  ggaagggtct  ggctgcaatt  gcagctcact  gctgctgcct
1801  ctgaaacaga  aagttggaaa  ggaaaaaaga  aaaaagcaat  taggtagcac  agcactttgg
1861  ttttgctgag  atcgaagagg  ccagtaggag  acacgacagc  acacacagtg  gattccagtg
1921  catggggagg  cactcgtgt  tatcaaatag  cgatgtgcag  gaagaaaagc  cctcttcat
1981  tccggggaac  aaagacgggt  attgttggga  aaggaacagg  cttggaggga  cttggaagaa
2041  taggcccgtg  atgatataat  cgggcaggac  tgttgtggta  ctggcaataa  gatacacagc
2101  tccgagctgt  aggagagtgc  gtctgctttg  gatgattttt  taagcagact  cagctgctat
2161  acttatcaca  ttttattaaa  cacagggaaa  gcatttagga  gaatagcaga  gagccaaatc
2221  tgacctaaaa  gttgaaaagc  caaaggtcaa  acaggtgtga  attccatcat  catcgttgtt
2281  attaaagaat  cttatctat  aaaaggtagg  tcagatcccc  ctccccccag  gttcctcctt
2341  cccctccga  ttgagcctta  cgacactttg  gtttatgcgg  tgctgtccgg  gtgccagggc
2401  tgcagggtcg  gtactgatgg  aggtgcagc  gccgggtgct  ctgtgtcaag  gtgaagcaca
2461  tacggcagac  ctcttagagt  ccttaagacg  gaagtaaatt  atgatgtcca  gggggagaag
2521  gaagatagga  cgtatttata  ataggtatat  agaacacaag  ggatataaaa  tgaaagattt
2581  ttactaatat  atattttaag  gttgcacaca  gtacacacca  gaagatgtga  aattcatttg
2641  tggcaattaa  gtggtcccaa  tgctcagcgc  ttaaaaaaac  aaattggaca  gctacttctg
2701  ggaaaaacaa  catcattcca  aaaagaagac  taatgagagc  aaatgcaaaa  ataaccaagt
2761  cctccgaagg  catctcacgg  aaccgtagac  taggaagtac  gagccccaca  gagcaggaag
2821  ccgatgtgac  tgcatacat  atttaacaat  gacaagatgt  tccggcgttt  atttctgcgt
2881  tgggttttcc  cttgccttat  gggctgaagt  gttctctaga  atccagcagg  tcacactggg
2941  ggcttcaggt  gacgatttag  ctgtggctcc  ctctcctgt  cctccccgc  acccctccc
3001  ttctgggaaa  caagaagagt  aaacaggaaa  cctacttttt  atgtgctatg  caaaatagac
3061  atctttaaca  tagtcctgtt  actatggtaa  cactttgctt  tctgaattgg  aagggaaaaa
3121  aatgtagcg  acagcatttt  aaggttctca  gacctccagt  gagtacctgc  aaaaatgagt
3181  tgtcacagaa  attatgatcc  tctatttctt  gaacctggaa  atgatgttgg  tccaaagtgc
3241  gtgtgtgtat  gtgtgagtgg  gtgcgtggta  tacatgtgta  catatatgta  taatatatat

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Fig. 64(b)

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3301 ctacaatata tattatatat atctatatca tatttctgtg gaggggttggc atggtaacca
3361 gccacagtac atatgtaatt ctttccatca ccccaacctc tcctttctgt gcattcatgc
3421 aagagtttct tgtaagccat cagaagttac ttttaggatg ggggagaggg gcgagaaggg
3481 gaaaaatggg aaatagtctg attttaatga aatcaaagt atgtatcatc agttggctac
3541 gttttgggtc tatgctaaac tgtgaaaaat cagatgaatt gataaaagag ttccctgcaa
3601 ccaattgaaa agtggttctgt gcgtctgttt tgtgtctggt gcagaatatg acaatctacc
3661 aactgtccct ttgtttgaag ttggtttagc tttggaaagt tactgtaaat gccttgcttg
3721 tatgatcgtc cctggtcacc cgactttgga atttgcacca tcatgtttca gtgaagatgc
3781 tgtaaatagg ttcagatttt actgtctatg gatttggggg gttacagtag ccttattcac
3841 ctttttaata aaaatacaca tgaaaacaag aaagaaatgg cttttcttac ccagattgtg
3901 tacatagagc aatggttggt ttttataaag tctaagcaag atgttttgta taaaatctga
3961 attttgcaat gtatttagct acagcttggt taacggcagt gtcattcccc tttgcactgt
4021 aatgaggaaa aaatggtata aaaggttgcc aaattgctgc atatttgctc cgtaattatg
4081 taccatgaat atttatttaa aatttcgttg tccaatttgt aagtaacaca gtattatgcc
4141 tgagttataa atattttttt ctttctttgt tttattttta tagcctgtca taggttttaa
4201 atctgcttta gtttcacatt gcagttagcc ccagaaaatg aaatccgtga agtcacattc
4261 cacatctgtt tcaaactgaa tttgttctta aaaaaataaa atattttttt cctatggaaa
4321 aaaaaaaaaa aaaaa

```

FIGURE 65. EphB4 Precursor Protein

```

1 melrvllcwa slaaaaleetl lntkletadl kwvtfpqvdg qweelsglde eqhsvrtyev
61 cdvqrapgga hwlrtgwvpr rgavhvyatl rftmleclsl pragrsket ftfvyyesda
121 dtatalt paw menpyikvdt vaaehltrkr pgaeatgkvn vktlrlgpls kagfylafqd
181 qgacmallsl hl fykkcaql tvnltrfpet vprelvvpva gscvvdavpa pgpspslycr
241 edggwaeqpv tgcscapgfe aaegntkcra caqgtfkpls gegscqpcpa nshsntigsa
301 vcqcrvg yfr artdprgapc ttppsaprsv vsrlngsslh lewsaplesg gredltyalr
361 crecrpggsc apcggdltfd pgprdlvepw vvrgrl rpdf tytfevtaln gvsslatgpv
421 pfepvnvtt d revppavsd i rvtrssps slawavprap sgavldyevk yhekgaegps
481 svrflktsen raelrglkr g asylvqvrar seagygpfgq ehhsqtqlde segwreqlal
541 iagtavvgv l vlvvivvav lclrkqsngr eaeysdkhgq ylighgtkvy idpftyedpn
601 eavrefakei dvsyvk ieev igagefgevc rgrlkapgk k escvaiktlk ggyterqrre
661 flseasingq fehpn iirle gvttnsmpvm iltefmenga ldsflrlndg qftviqlvgm
721 lrgiasgmry laemsvhrd laarnilvns nlvckvsdfg lsrfleenss dptytssl gg
781 kipi rwtape aiafrkftsa sdawsyg ivm wevmsfgerp ywdmsnq dvi naieqdyrlp
841 pppdcptslh qlmldcwqkd rnarprfpqv vsal dkmirn paslkivare nggashplld
901 grqphysafg svgewlraik mgryeesfaa agfgsfelvs qisaedllri gvtlaghqkk
961 ilasvqhmk s qakpgtpggt ggpapqy

```

FIGURE 66. EphrinB2

```
1  mavrrdsvwk ycwgvmlvlc rtaisksivl epiywnssns kflpgqglvl ypqigdkldi
61 icpkvdsktv gqeyeykvym vdkdqadrct ikkentplln cakpdqdikf tikfgefspn
121 lwglefqknk dyyiiistsng slegldnqeg gvcqtramki lmkvgqdass agstrnkdpd
181 rrpeleagtn grssttspfv kpnpgsstg nsaghsgnni lgsevalfag iasgciifiv
241 iitlrvlll kyrrrrhrkhs pqhtttlsls tlatpkrsng nngsepsdii iplrtadsvf
301 cphyekvsge yghpvyivqe mppqspaniy ykv
```